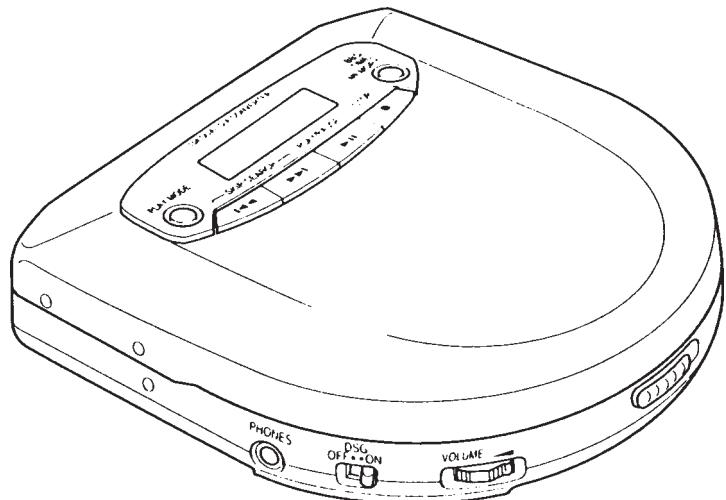


**CASIO**®

# Service Manual

(without price)

## PZ-3100



**Model-B: USA**

**Model-C: Europe**

**INDEX**

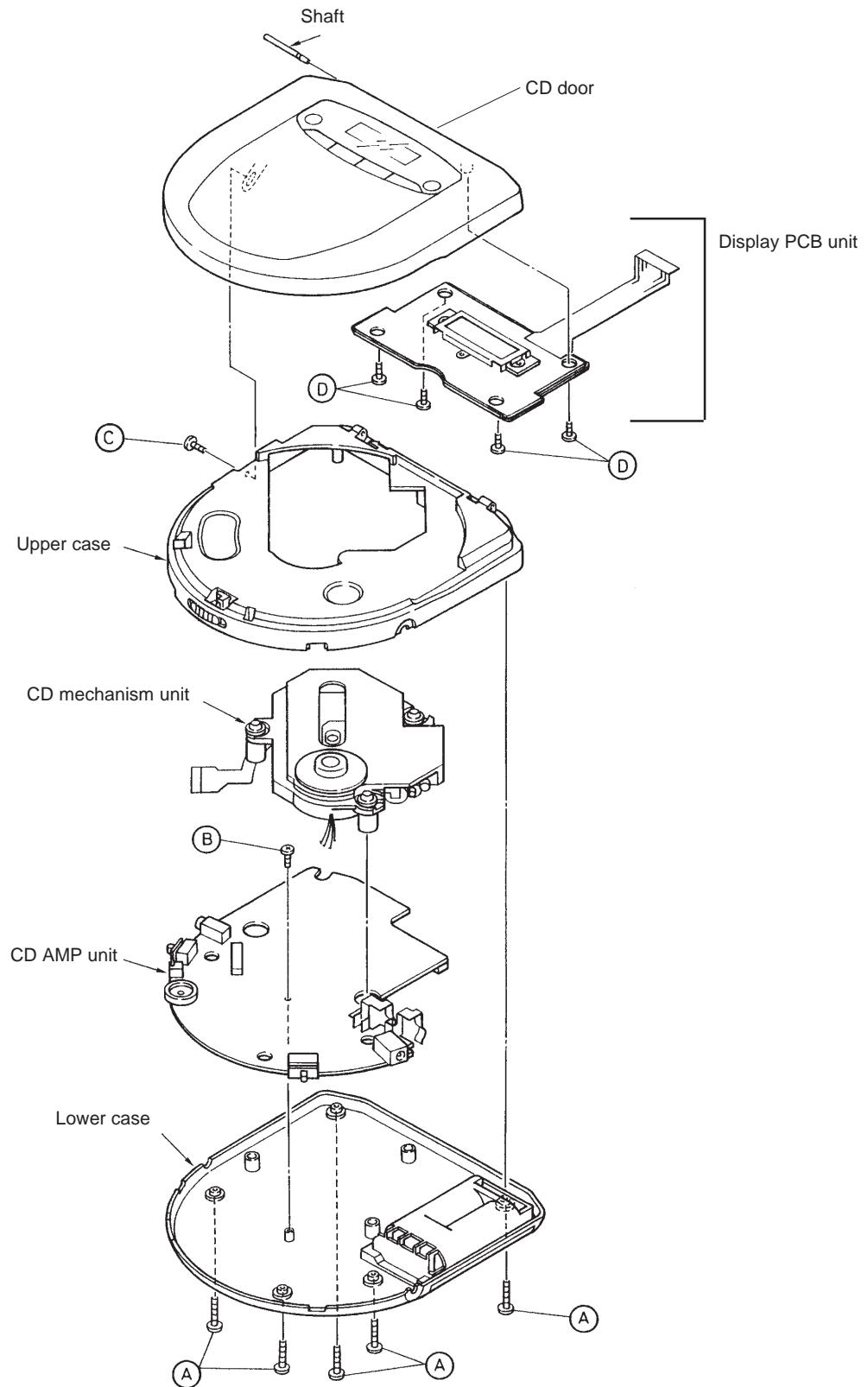
**PORTABLE CD PLAYER**

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## DISASSEMBLY INSTRUCTIONS

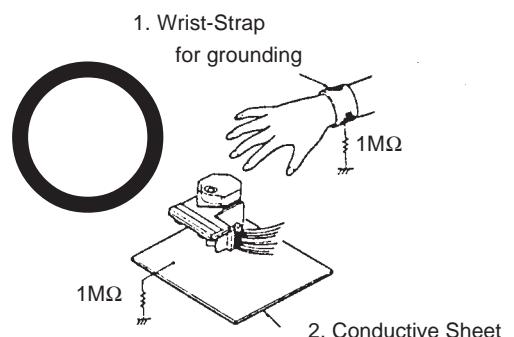
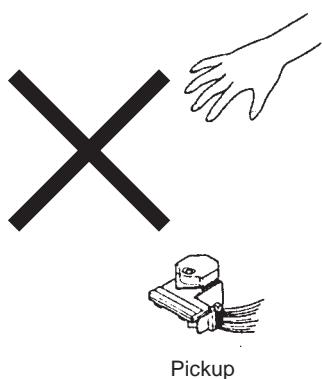
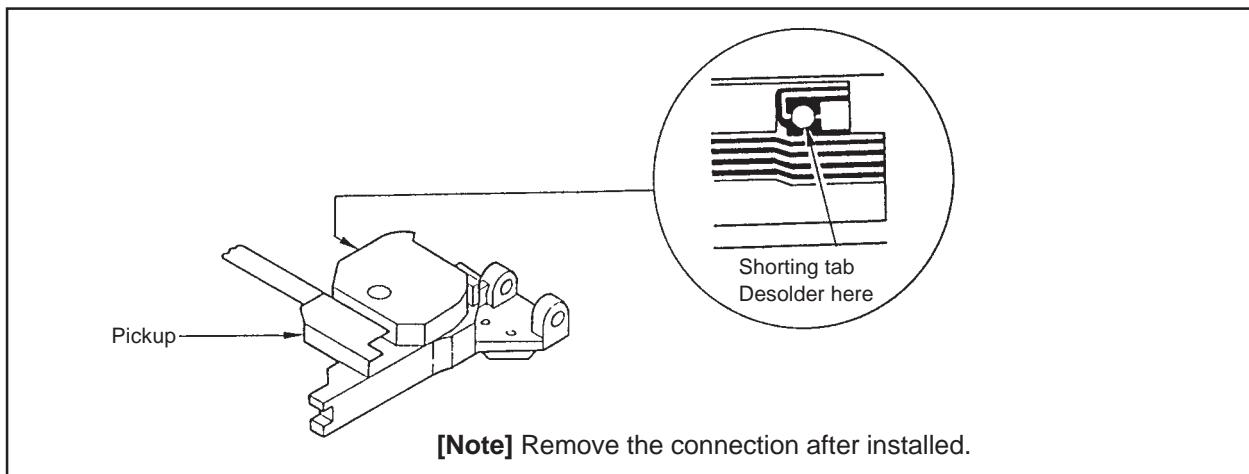
1. Remove five screws **(A)** holding the case assembly.
2. Remove the CD mechanism unit.
3. Remove screw **(B)** holding the CD AMP unit.
4. Remove screw **(C)** and pull out the shaft holding the CD door.
5. Remove four screws **(D)** holding the display PCB unit.



## CD ADJUSTMENT

### Precautions

To prevent damage caused by static electricity, the following procedures for grounding is required for repairing the unit.



#### 1. Grounding for the human body

Be sure to put on a wrist-strap for grounding (with impedance lower than  $10^6 \Omega$ ) whose other end is grounded. The strap works to drain away the static electricity build-up on the human body.

#### 2. Grounding for the work table

Be sure to lay on the table a conductive sheet (with impedance lower than  $10^6 \Omega$ ) such as a sheet of copper which is grounded.

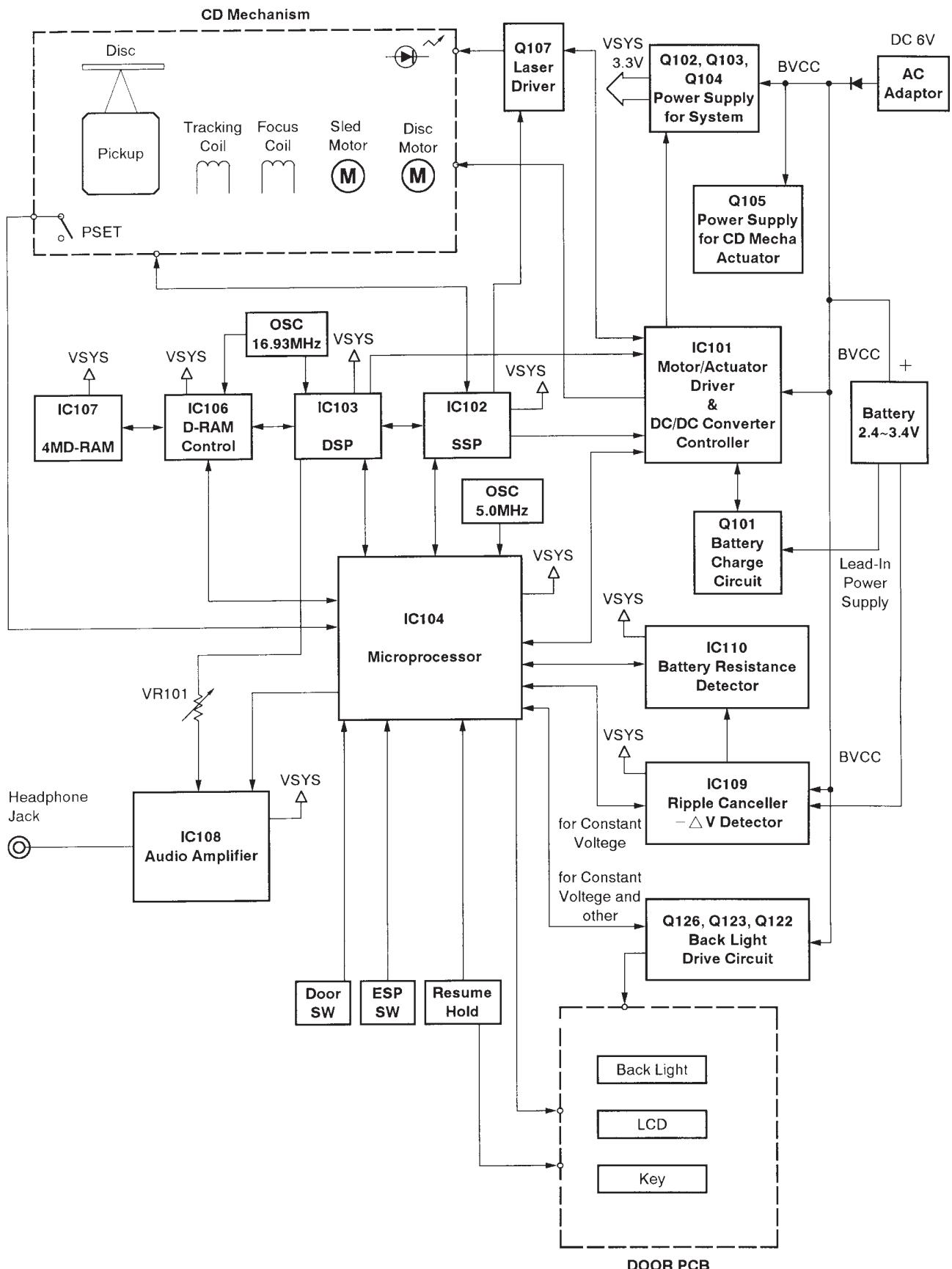
#### 3. As static electricity build-up on clothes is not drained away, be careful not to let your clothes touch the unit.

#### 4. The short-pad on the pick-up PCB of a spare part is short-circuited for protection during shipment. To open the short circuit, remove the soldering quickly with a soldering iron whose insulation resistance is larger than $10M\Omega$ after connection to a suitable APC circuit.

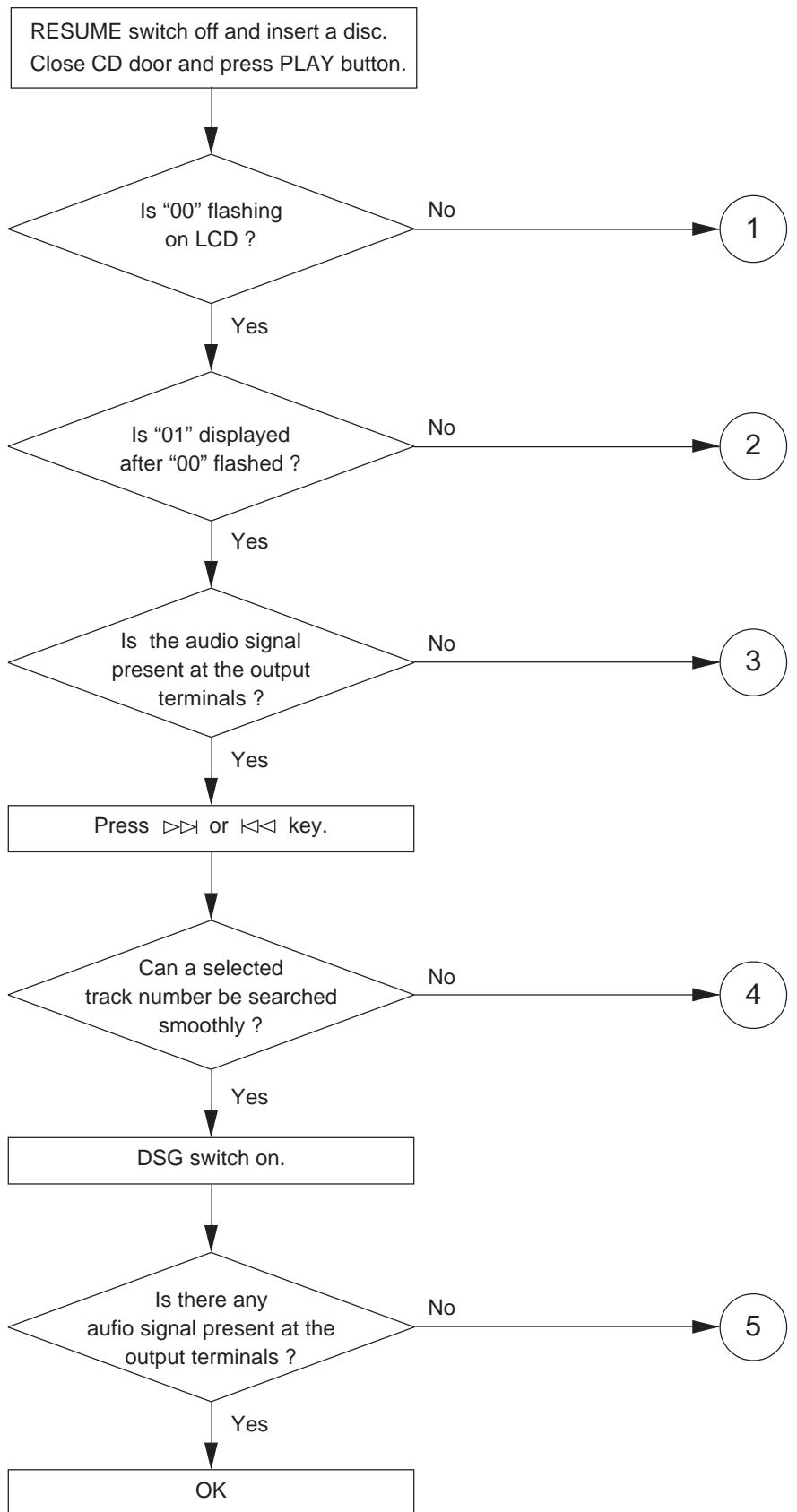
### Equipment Required

- Multi Meter
- Oscilloscope
- Compact Disc
- Dummy Load 10 kΩ

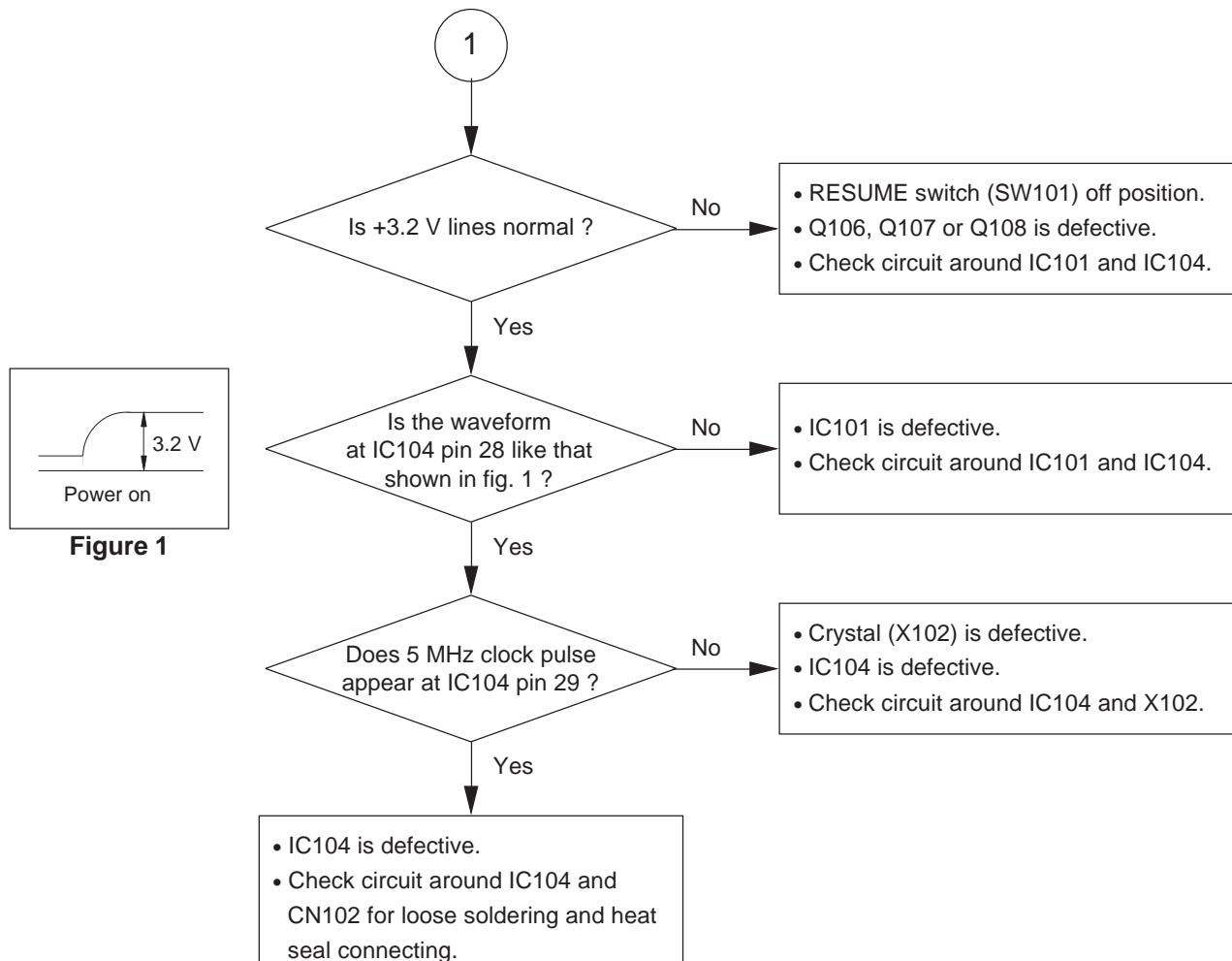
## BLOCK DIAGRAM



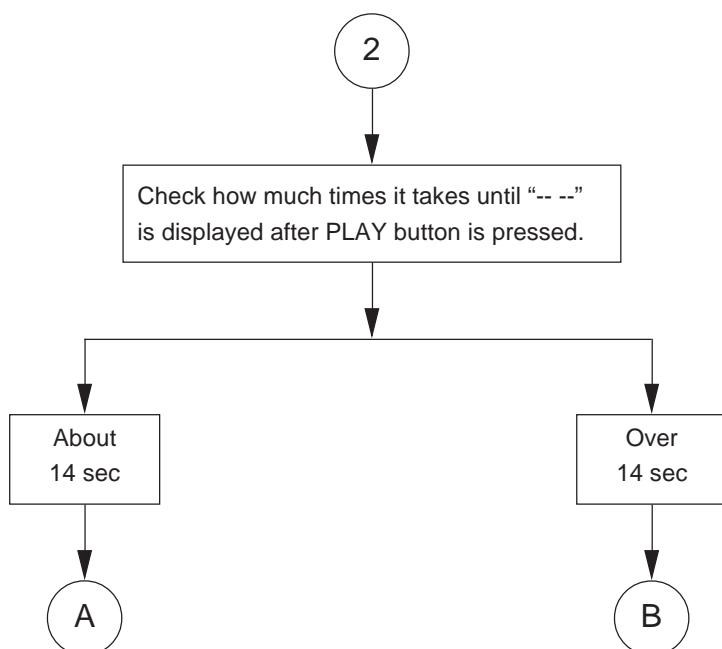
## TROUBLESHOOTING



### Repair Item 1: At power on, "00" is not displayed.

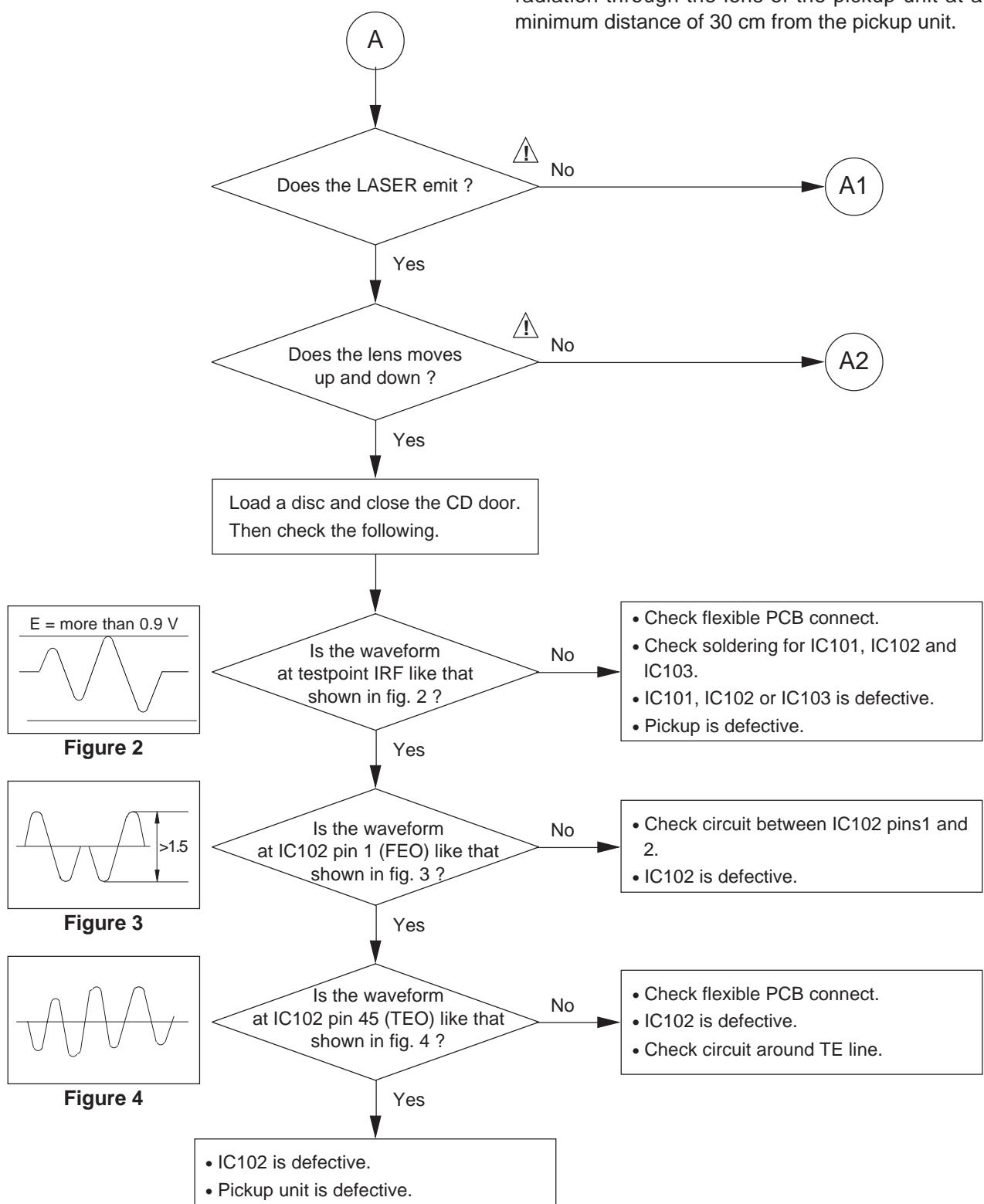


### Repair Item 2: "---" is displayed instead of playing first song track.

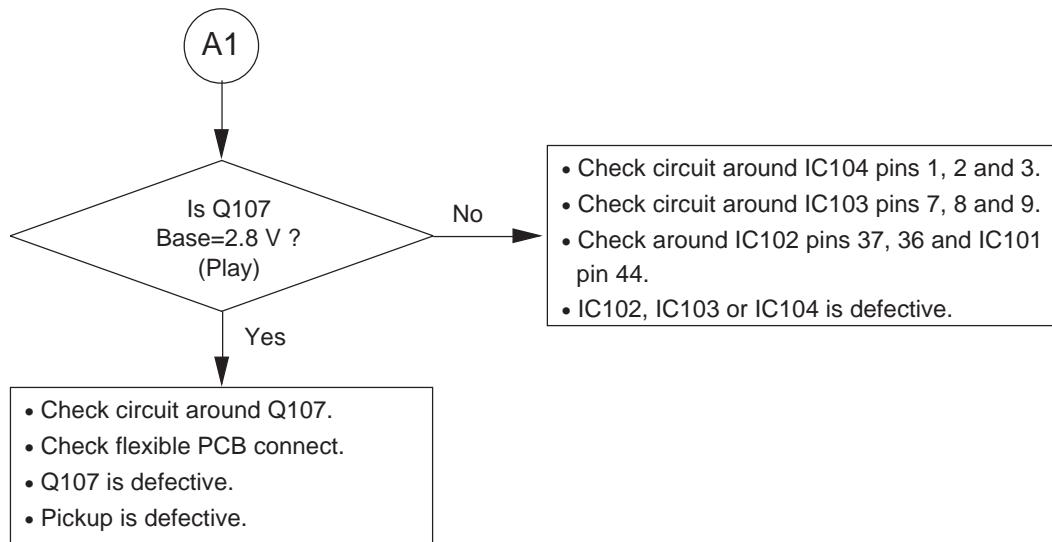


## Repair Item 2-A

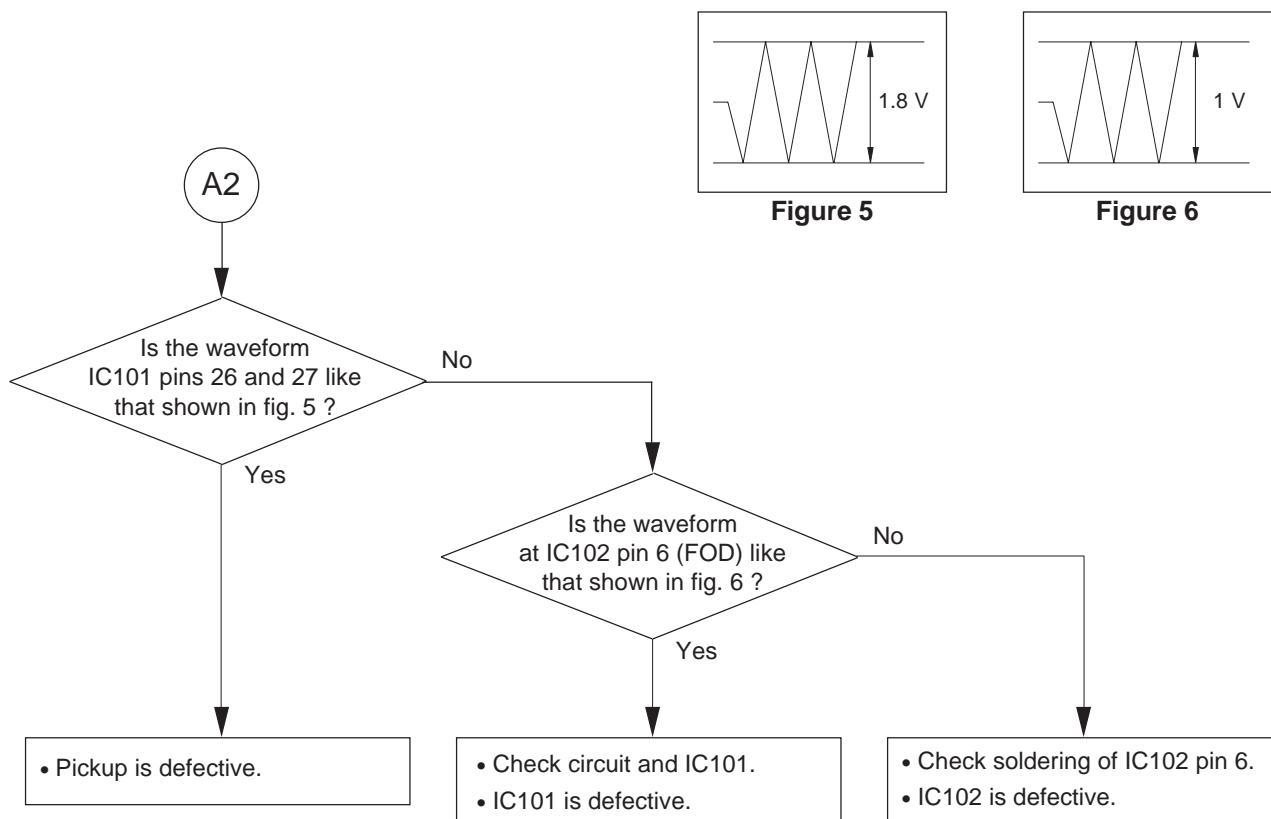
**Note:** Connect GND to door switch by removing the top cabinet. Then open the top cover and check the radiation power with an optical power meter. If an optical power meter is not available, watch the radiation through the lens of the pickup unit at a minimum distance of 30 cm from the pickup unit.



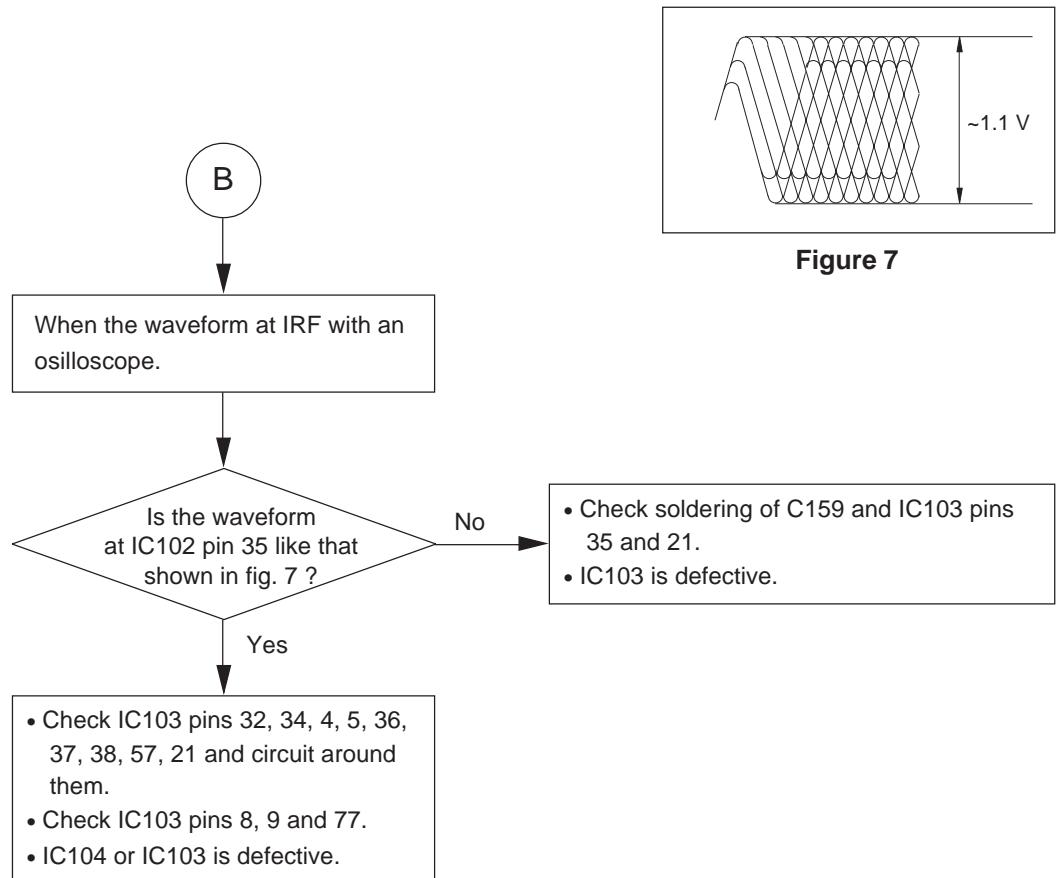
## Repair Item 2-A1: Laser does not emit.



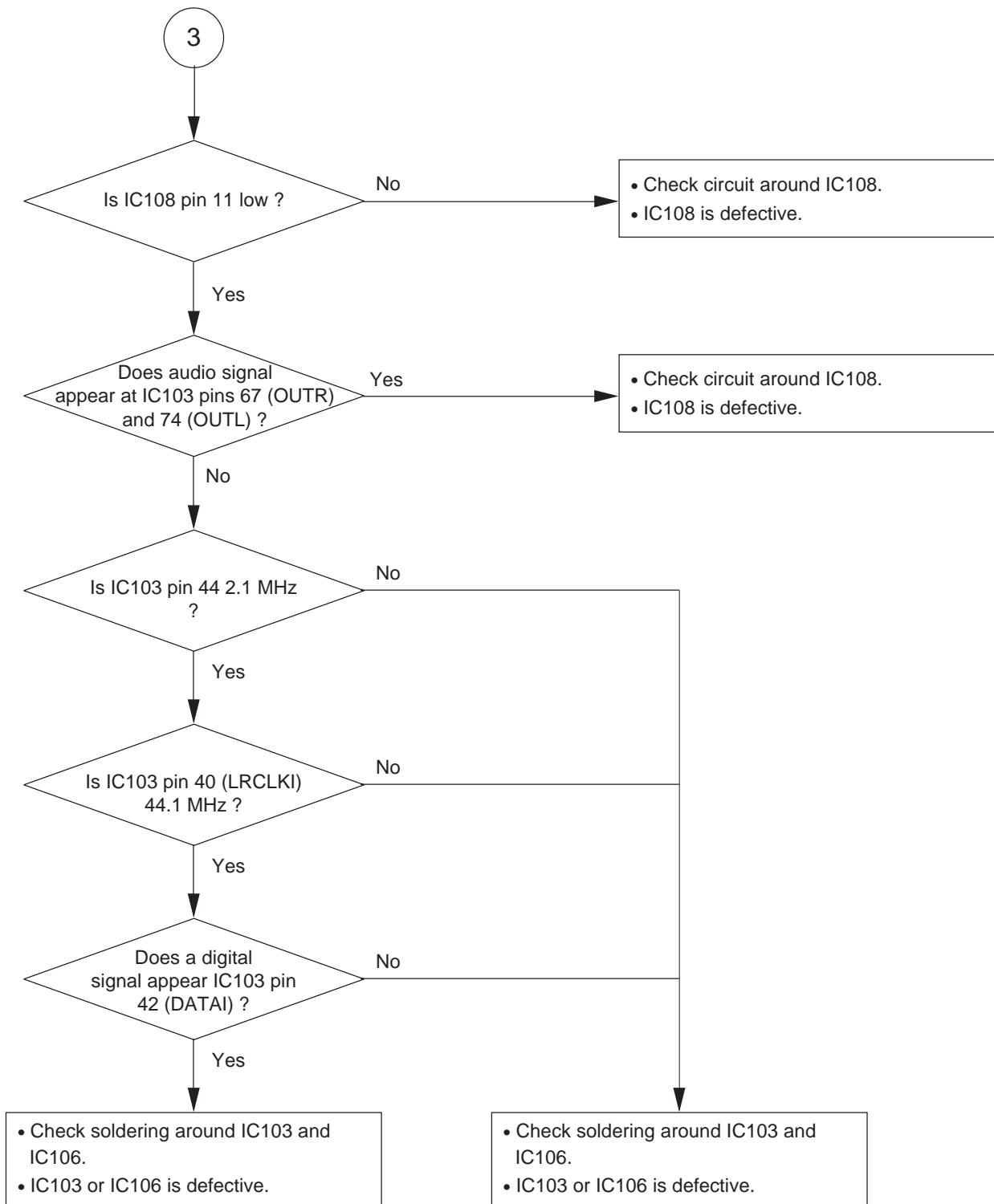
## Repair Item 2-A2: Object lens of pickup unit does not move up and down.



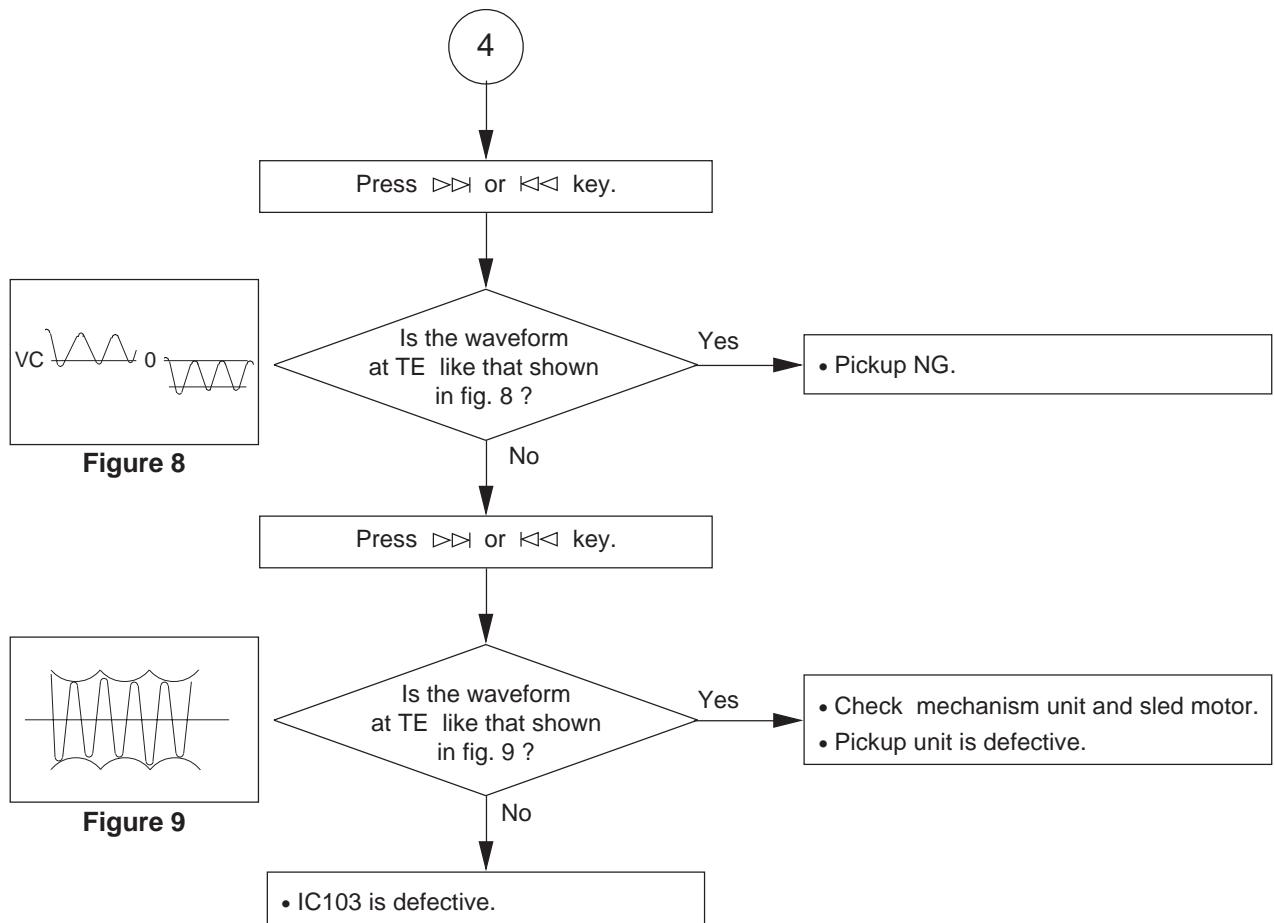
## Repair Item 2-B



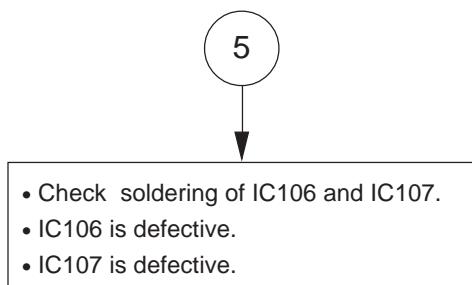
### Repair Item 3: No audio signal.



#### Repair Item 4: Selected track number cannot be searched.

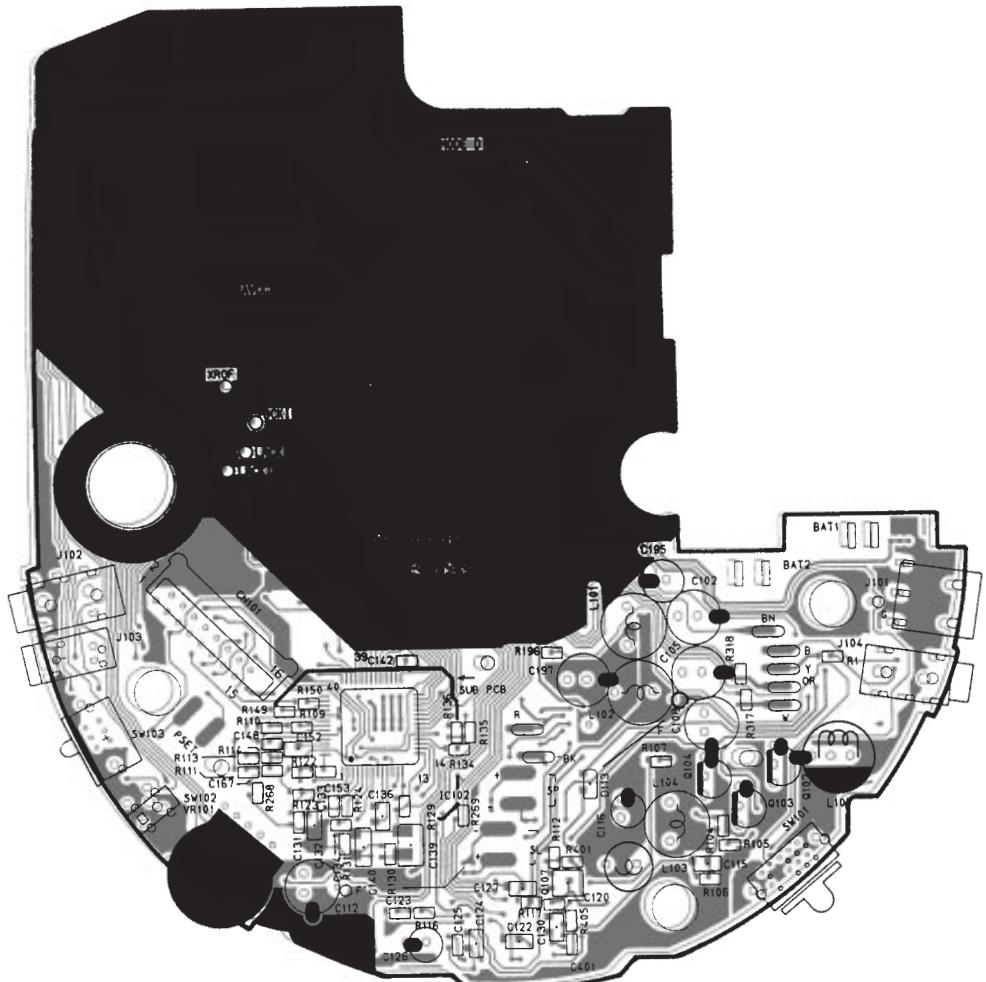


#### Repair Item 5: No audio signal output.

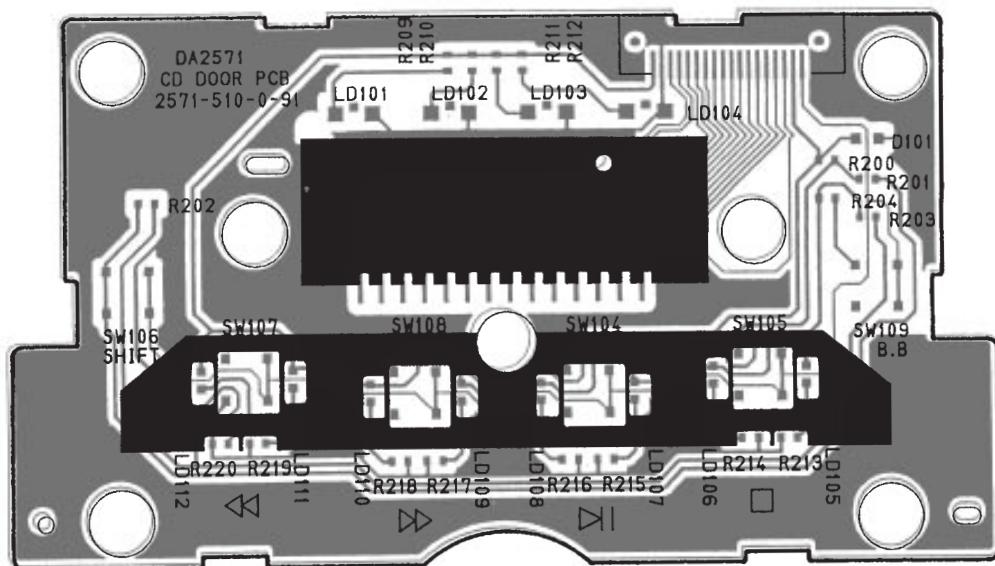


## PCB VIEWS

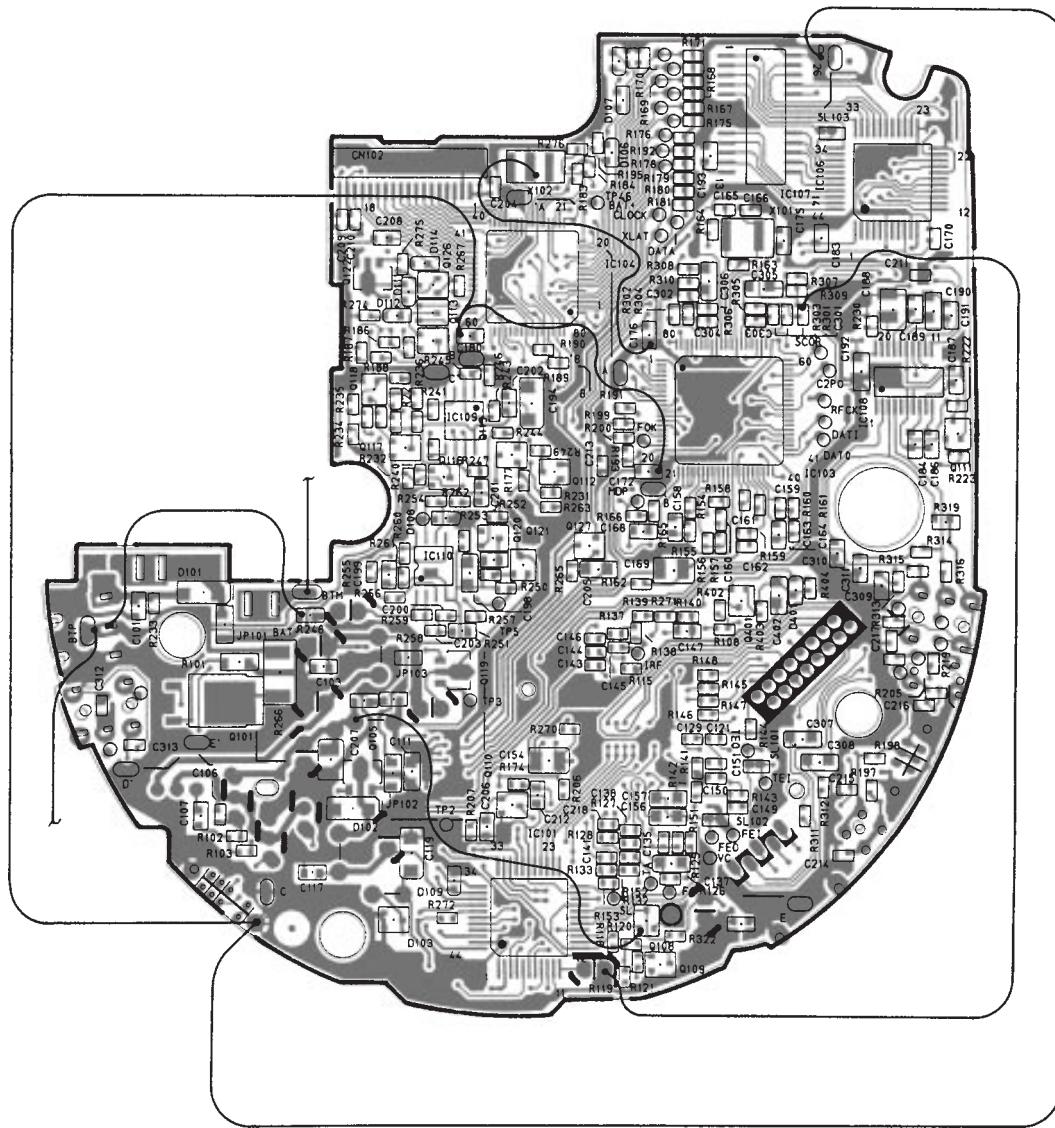
## CD AMP PCB Top View



## CD Door PCB Top View

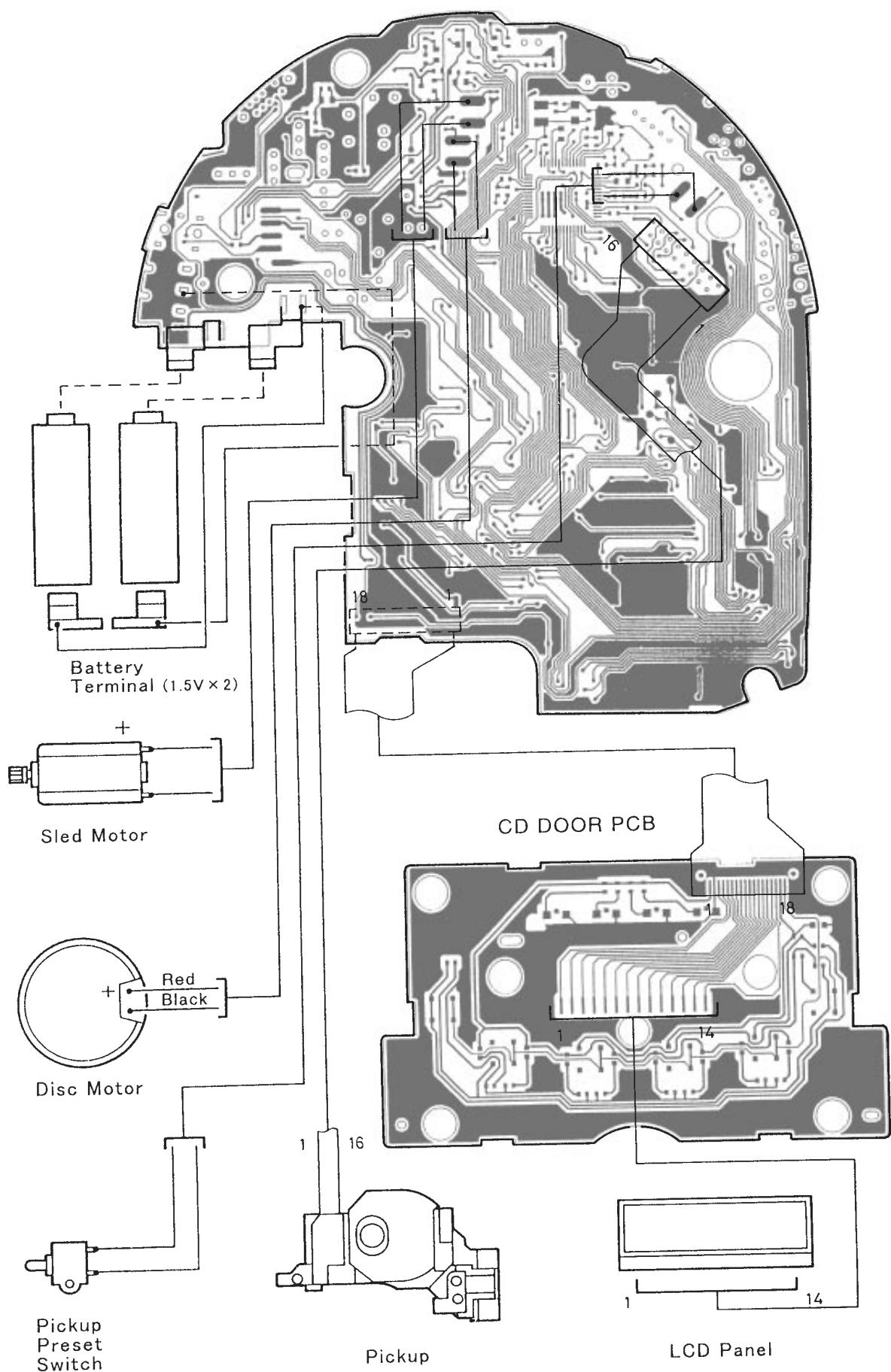


## CD AMP PCB Bottom View



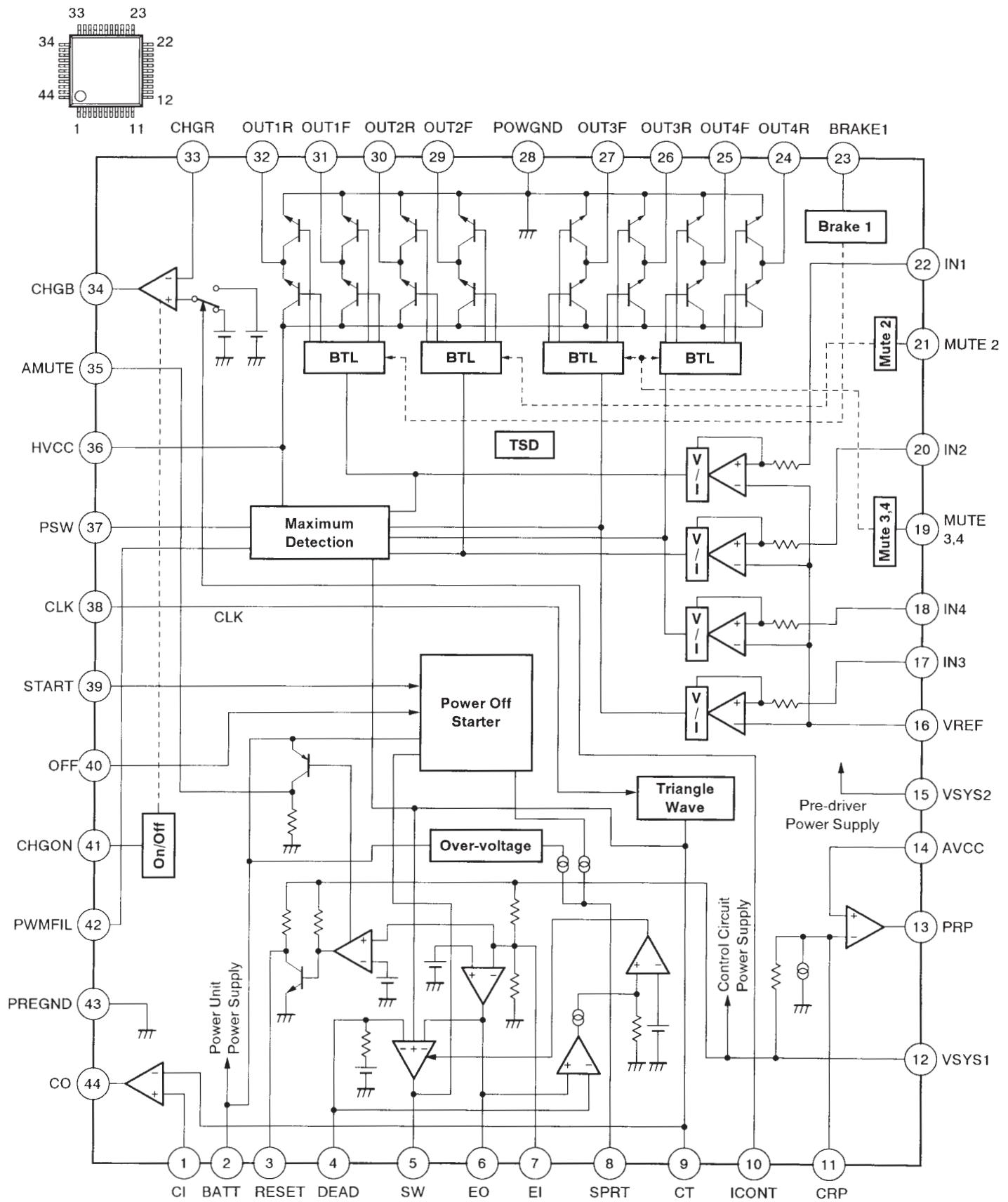
## WIRING DIAGRAMS

AMP PCB

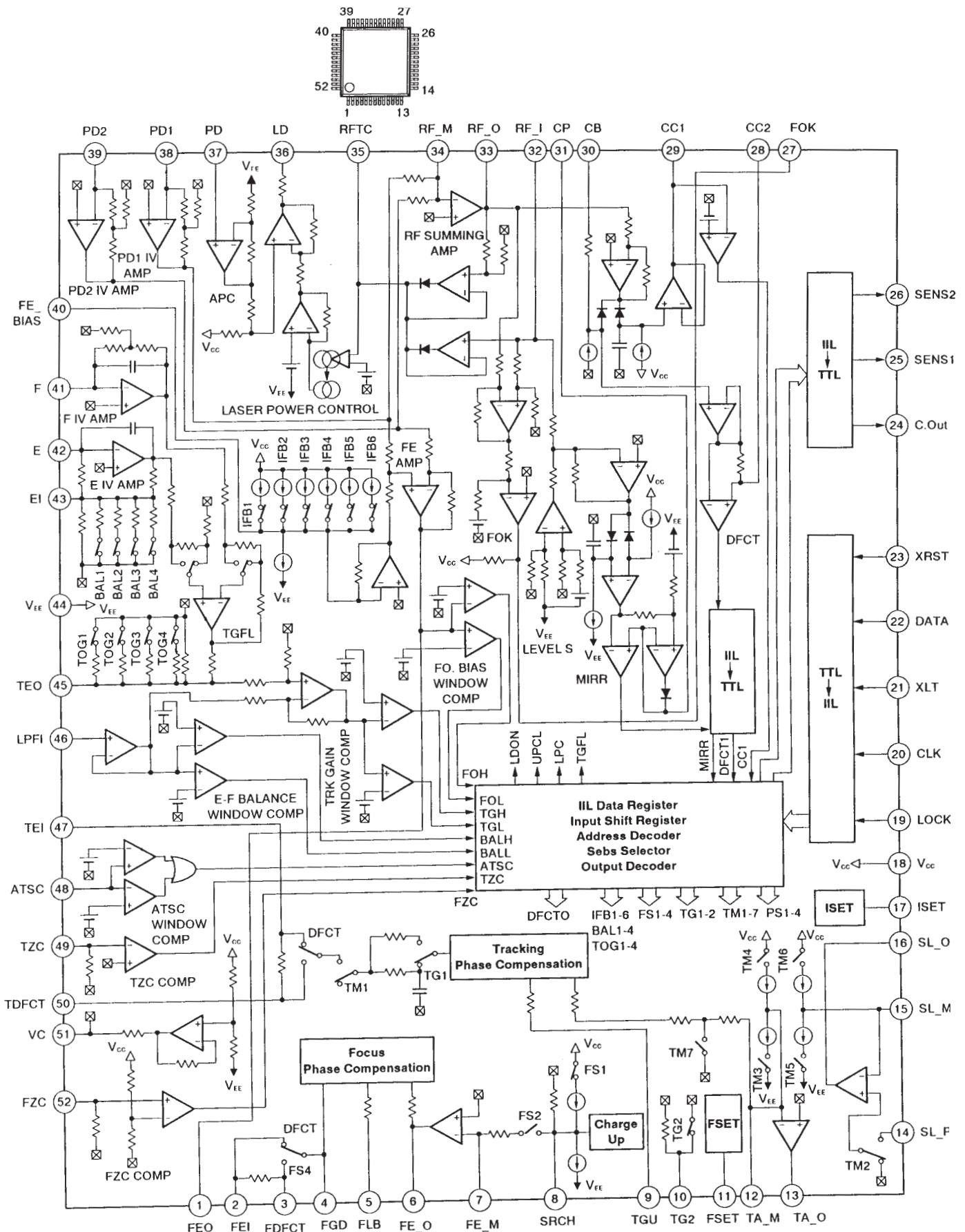


## IC LEAD IDENTIFICATION AND INTERNAL DIAGRAMS

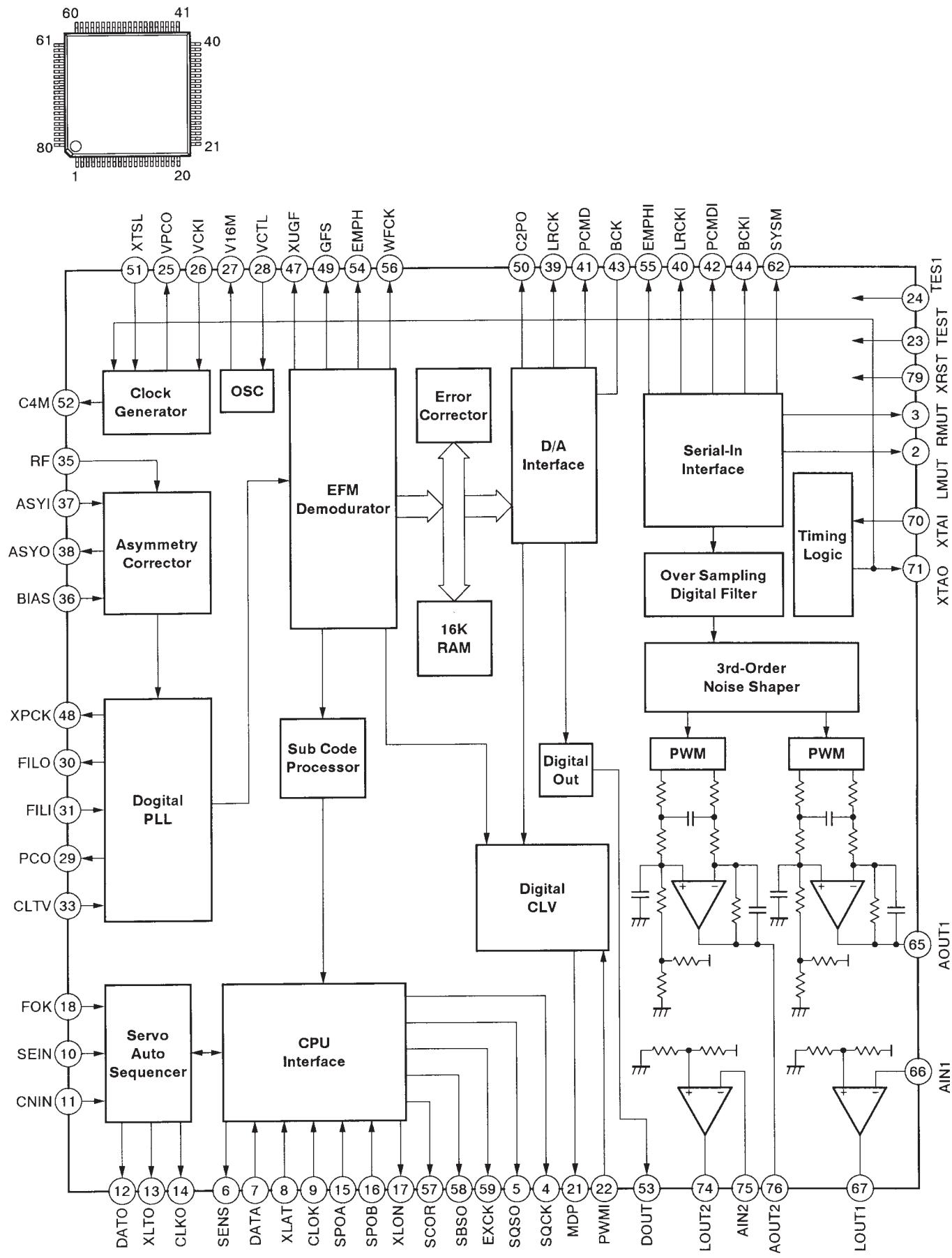
IC101: BA6894K



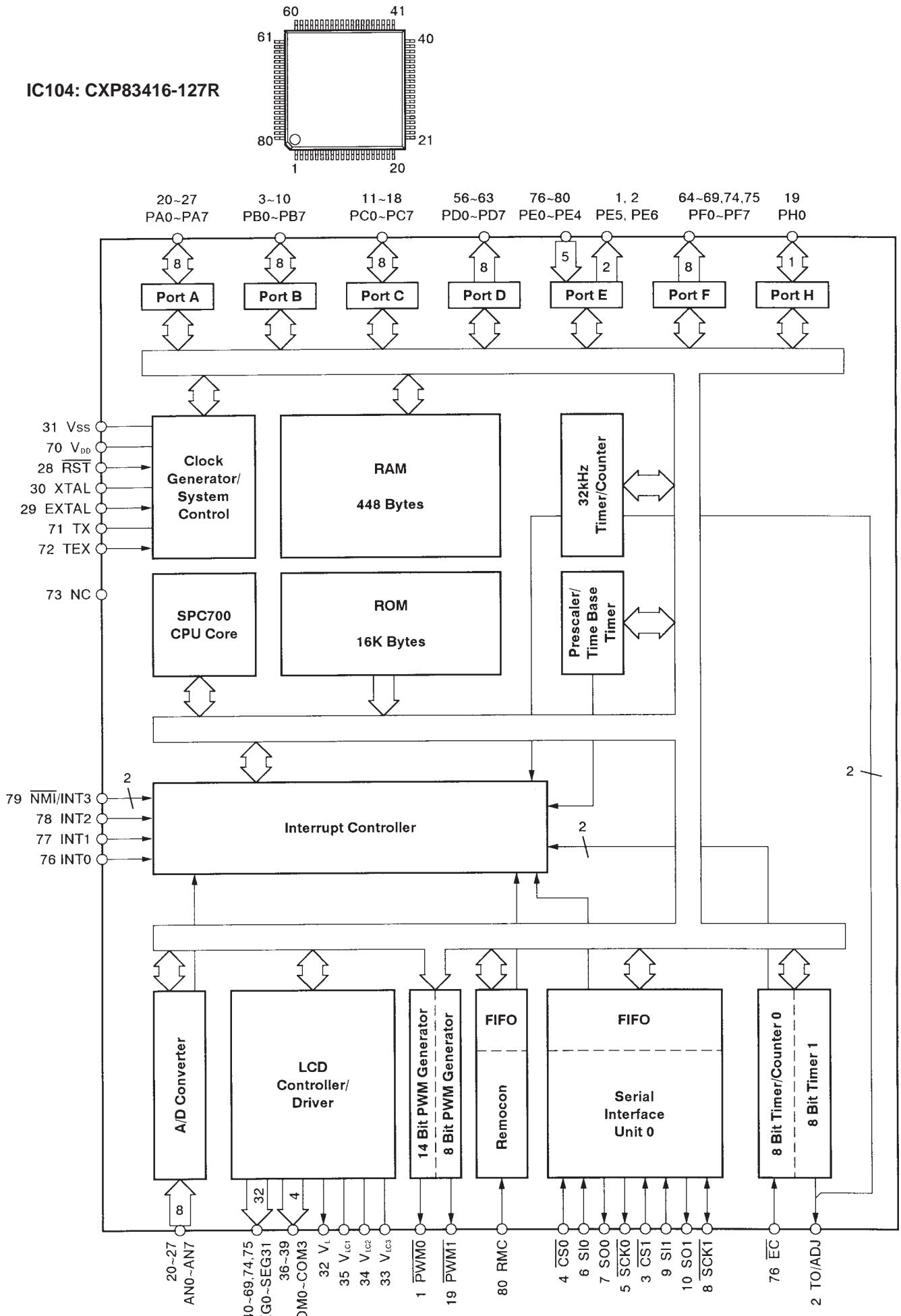
IC102: CXA1992AR



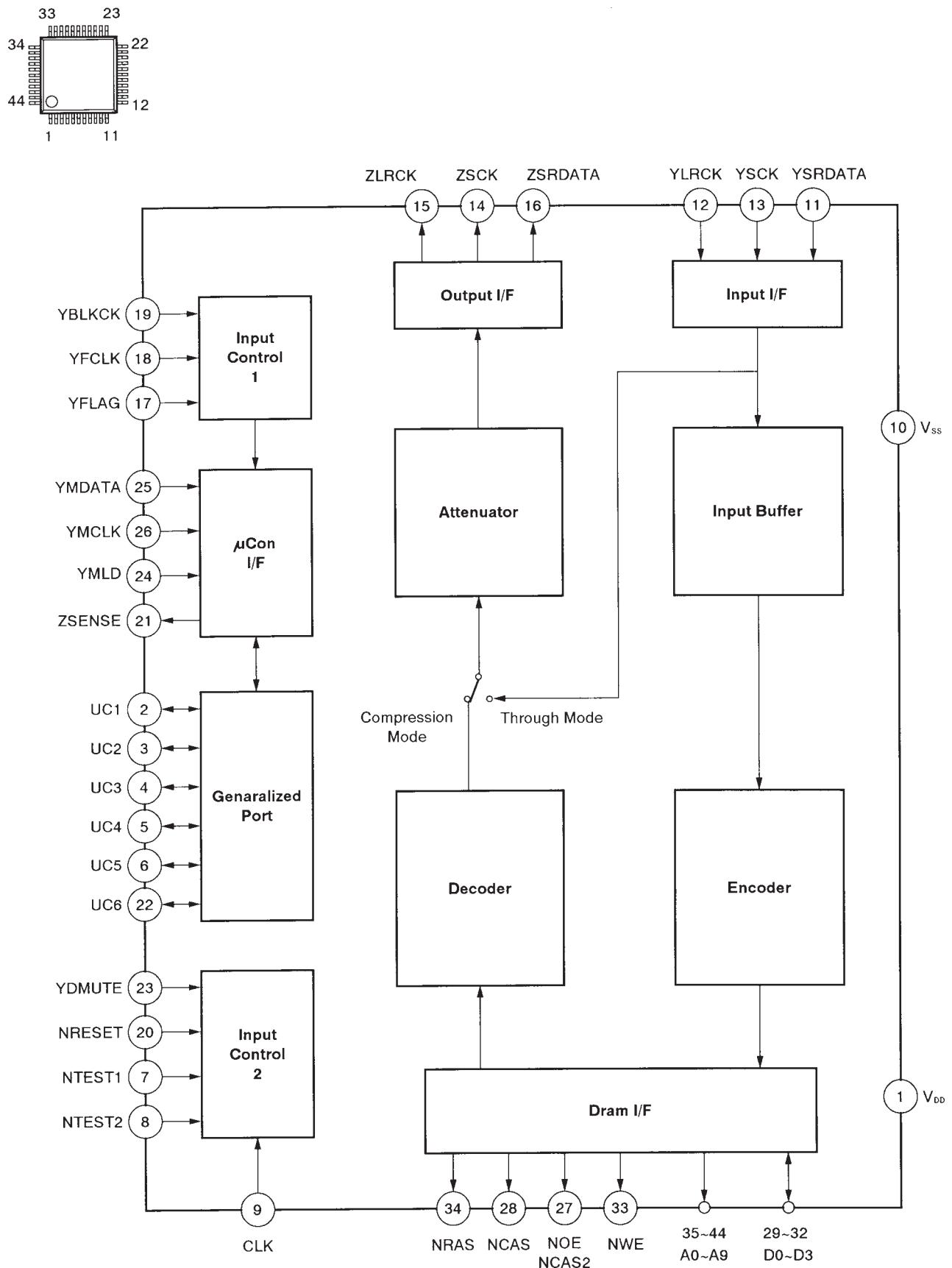
## IC103: CXD2589Q



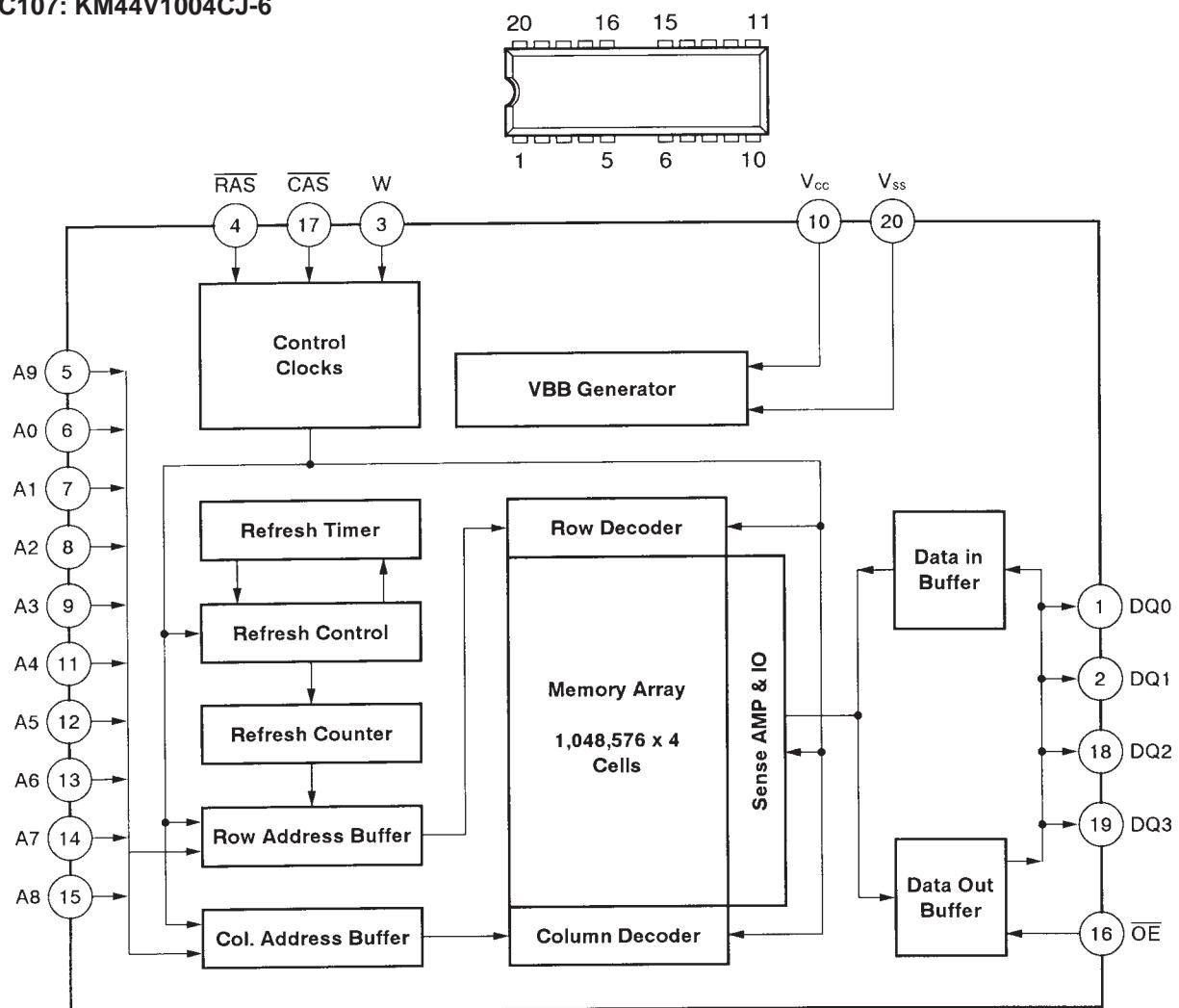
IC104: CXP83416-127R



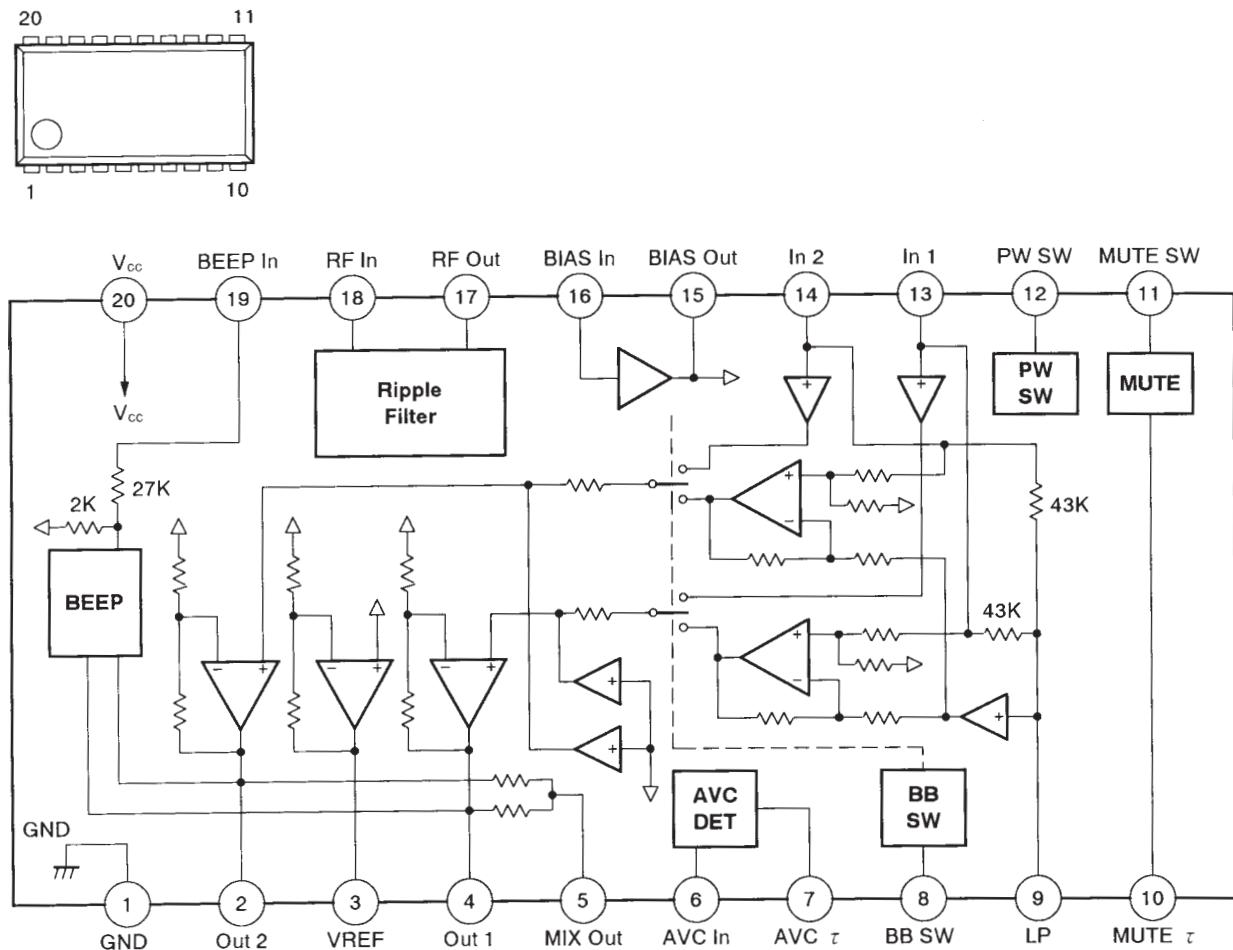
## IC106: SM5859AF-TF



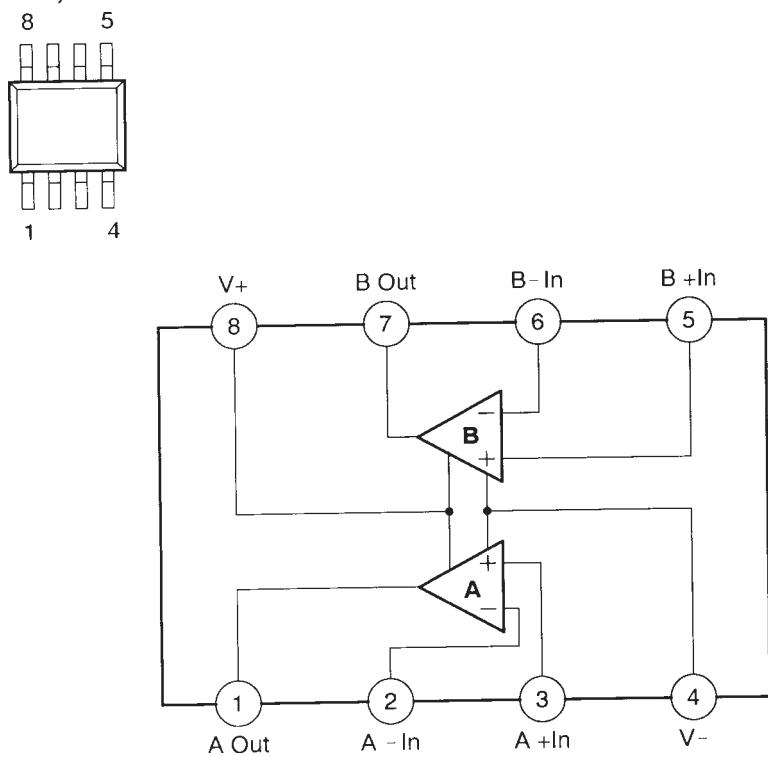
**IC107: KM44V1004CJ-6**



### IC108: BA3574BFS

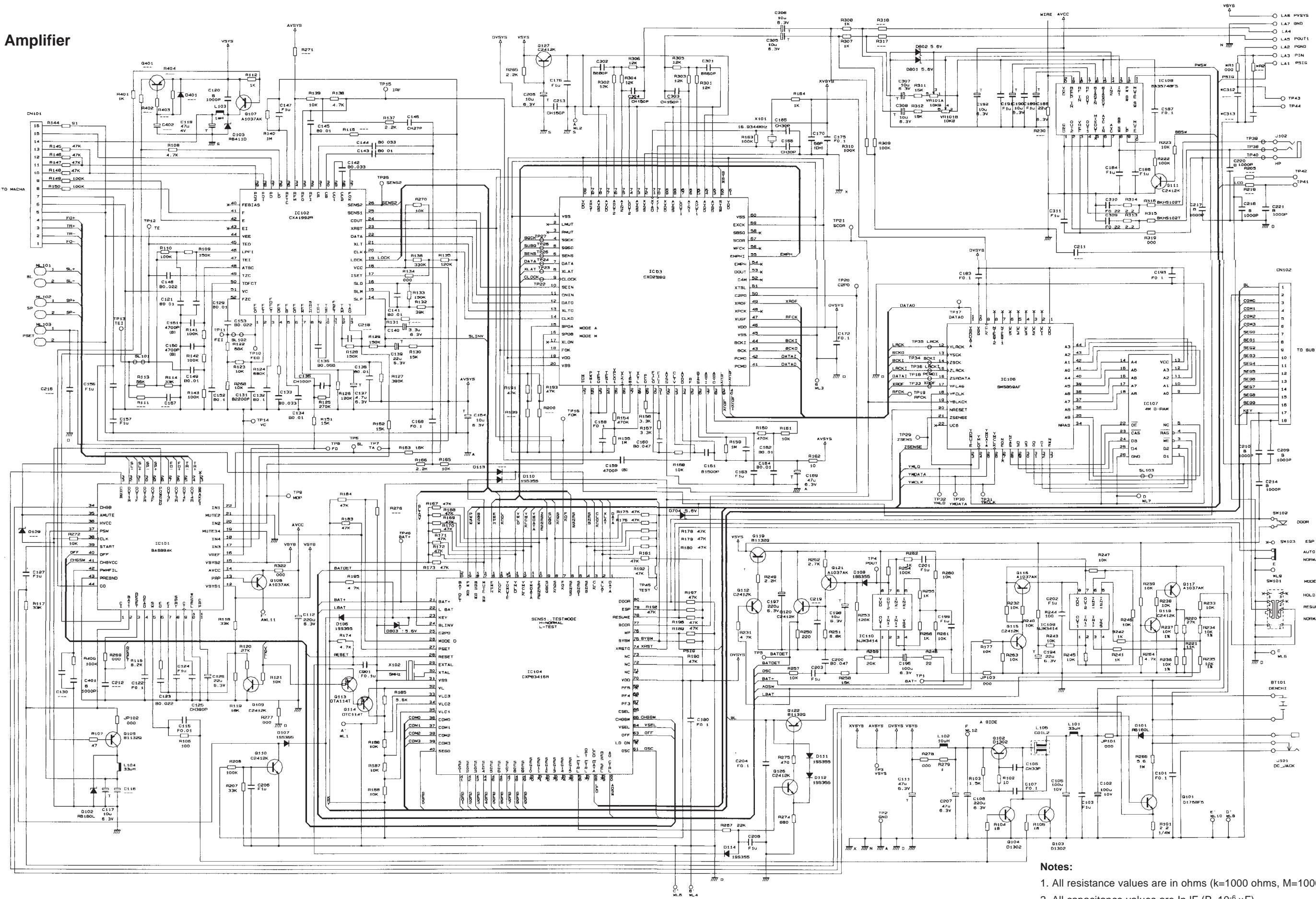


### IC109, IC110: NJM3414AM-TE2



## SCHEMATIC DIAGRAMS

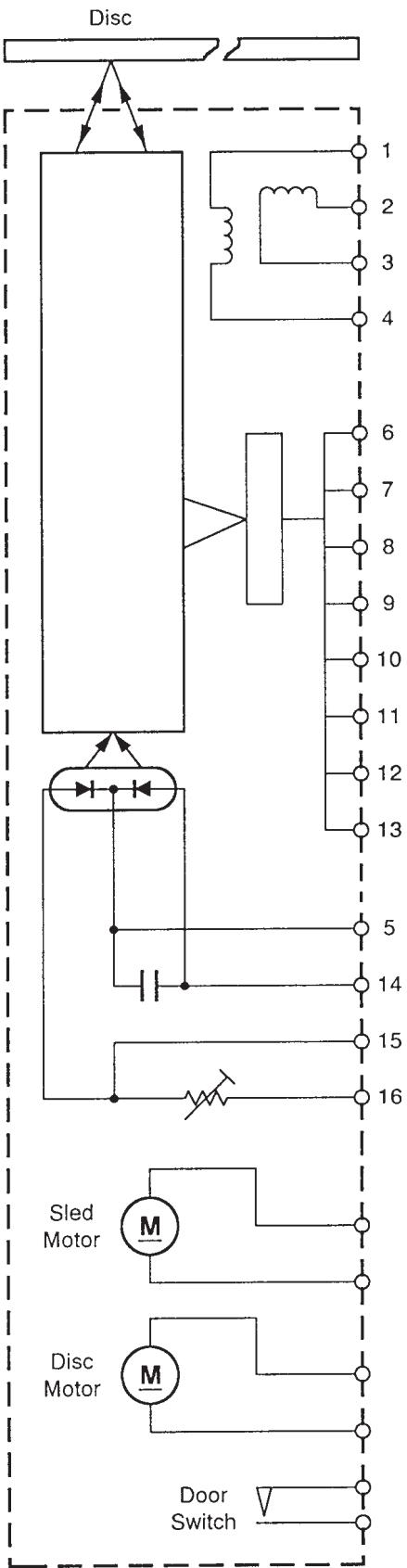
## CD Amplifier



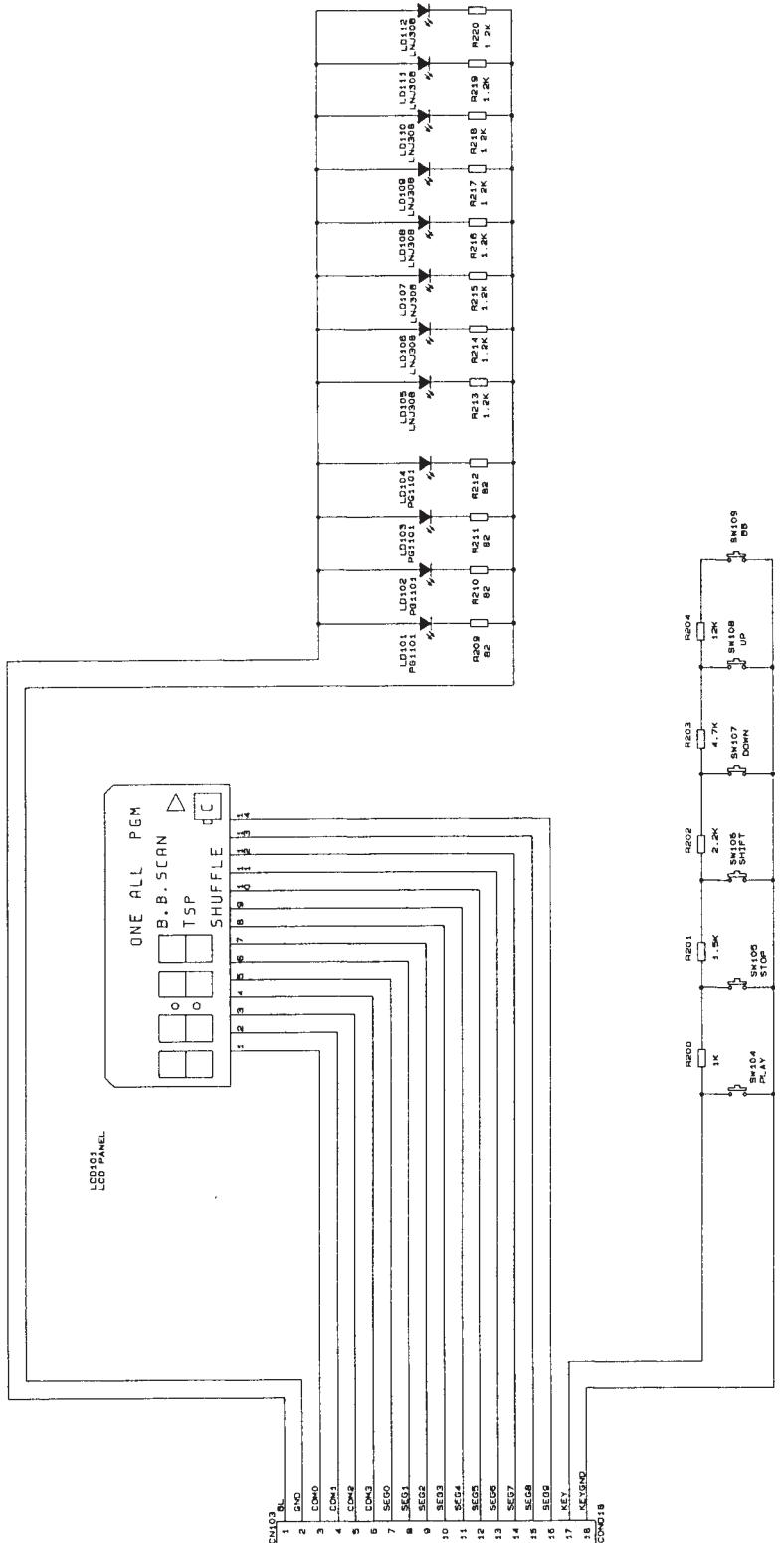
## Notes:

1. All resistance values are in ohms ( $k=1000$  ohms,  $M=1000$  kohms).
2. All capacitance values are in F ( $P=10^{-6}$   $\mu$ F).
3. All resistors are 1/16 watt, unless otherwise specified.

## Plck-up



## CD Door



# **PARTS LIST**

**PZ-3100**

Notes: 1. Prices and specifications are subject to change without pointer notice.

2. As for spare parts order and supply, refer to the "GUIDEBOOK for Spare parts Supply", published separately.

3. The numbers in item column correspond to the same numbers in drawing.

N	Item	Code No.	Parts Name	Specification	Q'ty	R	Remark
---	------	----------	------------	---------------	------	---	--------

### ELECTRICAL PARTS

DIODES							
N	D101	1909 7217	Diode	0915-512-8-00	2	C	PZ-3100 Common
	D102	1909 7217	Diode	0915-512-8-00	2	C	PZ-3100 Common
	D103	1915 7022	Diode	0915-523-4-00	1	C	PZ-3100 Common
	D106	1909 5846	Diode	0915-508-3-00	1	C	PZ-3100 Common
	D107	1909 5846	Diode	0915-508-3-00	1	C	PZ-3100 Common
	D108	1909 5846	Diode	0915-508-3-00	1	C	PZ-3100 Common
	D110	1909 5846	Diode	0915-508-3-00	1	C	PZ-3100 Common
	D111	1909 5846	Diode	0915-508-3-00	1	C	PZ-3100 Common
	D112	1909 5846	Diode	0915-508-3-00	1	C	PZ-3100 Common
	D114	1909 5846	Diode	0915-508-3-00	1	C	PZ-3100 Common
N	D801	1915 7023	Diode	0915-518-9-00	1	C	PZ-3100 Common
N	D802	1915 7023	Diode	0915-518-9-00	1	C	PZ-3100 Common
N	D803	1915 7023	Diode	0915-518-9-00	1	C	PZ-3100 Common
IC's							
	IC101	1915 0140	IC	0911-204-0-00	1	A	PZ-3100 Common
	IC102	1915 0141	IC	0911-203-9-00	1	A	PZ-3100 Common
	IC103	1915 0142	IC	0911-203-8-00	1	A	PZ-3100 Common
	IC104	1915 0143	IC	0037-405-0-00	1	A	PZ-3100 Common
	IC106	1915 0144	IC	0911-842-3-00	1	A	PZ-3100 Common
	IC107	1915 0145	IC	0911-839-4-00	1	A	PZ-3100 Common
	IC108	1915 0146	IC	0911-204-1-00	1	A	PZ-3100 Common
	IC109	1915 0147	IC	0911-842-2-00	1	A	PZ-3100 Common
	IC110	1915 0147	IC	0911-842-2-00	1	A	PZ-3100 Common
JACK							
	J101	3502 0003	Jack	0033-672-0-0013	1	B	PZ-3100 Common
	J102	1909 5601	Jack	0033-485-0-01	1	B	PZ-3100 Common
COIL							
	L101	1909 9829	Inductor	0990-553-3-06	1	C	PZ-3100 Common
	L102	3013 1197	Inductor	0990-591-0-05	1	C	PZ-3100 Common
	L103	1915 0148	Inductor	0990-561-0-25	1	C	PZ-3100 Common
	L104	1909 9829	Inductor	0990-553-3-06	1	C	PZ-3100 Common
	L105	1909 9830	Inductor	0990-869-5-05	1	C	PZ-3100 Common
LCD PANEL							
N	LC101	1915 7024	LCD	0040-423-0-0013	1	C	PZ-3100 Common
TRANSISTOR							
	Q101	2253 0709	Transistor	2SD1758TLQ	1	B	PZ-3100 Common
	Q102	1909 9831	Transistor	0906-201-2-20	1	B	PZ-3100 Common
	Q103	1909 9831	Transistor	0906-201-2-20	1	B	PZ-3100 Common
	Q104	1909 9831	Transistor	0906-201-2-20	1	B	PZ-3100 Common
	Q105	1909 6532	Transistor	0906-512-0-17	1	B	PZ-3100 Common
	Q107	1909 5849	Transistor	0906-505-2-19	1	B	PZ-3100 Common
	Q108	1909 5849	Transistor	0906-505-2-19	1	B	PZ-3100 Common
	Q109	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common
	Q110	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common
	Q111	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common
	Q112	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common
	Q113	1909 5851	Transistor	0906-502-0-00	1	B	PZ-3100 Common
	Q114	1909 5850	Transistor	0906-502-5-00	1	B	PZ-3100 Common
	Q115	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common
	Q116	1909 5849	Transistor	0906-505-2-19	1	B	PZ-3100 Common
	Q117	1909 5849	Transistor	0906-505-2-19	1	B	PZ-3100 Common
	Q118	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common
	Q119	1909 6532	Transistor	0906-512-0-17	1	B	PZ-3100 Common
	Q120	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common
	Q121	1909 5849	Transistor	0906-505-2-19	1	B	PZ-3100 Common
	Q122	1909 6532	Transistor	0906-512-0-17	1	B	PZ-3100 Common
	Q126	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common
	Q127	1909 3809	Transistor	0906-500-9-18	1	B	PZ-3100 Common

Note : N - New parts

M - Minimum order/supply quantity

R - Rank

N	Item	Code No.	Parts Name	Specification	Q'ty	R	Remark
<b>SWITCHES</b>							
	SW101	1915 0138	Switch / slide	0028-434-0-0013	1	C	PZ-3100 Common
	SW102	1909 8266	Switch / push	0028-060-0-00	1	C	PZ-3100 Common
	SW103	1909 8267	Switch / slide	0028-398-0-00	1	C	PZ-3100 Common
	SW104	1915 0139	Switch / TP-tact	0028-667-0-0001	1	C	PZ-3100 Common
	SW105	1915 0139	Switch / TP-tact	0028-667-0-0001	1	C	PZ-3100 Common
	SW106	1915 0139	Switch / TP-tact	0028-667-0-0001	1	C	PZ-3100 Common
	SW107	1915 0139	Switch / TP-tact	0028-667-0-0001	1	C	PZ-3100 Common
	SW108	1915 0139	Switch / TP-tact	0028-667-0-0001	1	C	PZ-3100 Common
	SW109	1915 0139	Switch / TP-tact	0028-667-0-0001	1	C	PZ-3100 Common
<b>VARIABLE RESISTOR</b>							
	VR101	1909 8272	Volume	0031-639-1-03	1	C	PZ-3100 Common
<b>OSCILLATOR</b>							
	X101	1915 0152	Resonator / ceramic	0038-999-0-00	1	C	PZ-3100 Common
	X102	1915 0153	Resonator / ceramic	0038-800-0-00	1	C	PZ-3100 Common

#### MECHANICAL PARTS

N	1	1915 7027	Panel / display	2564-806-0-02	1	X	PZ-3100 Common
N	2	1915 7028	Adhesive tape	2564-880-0-00	1	X	PZ-3100 Common
N	3	1915 7026	Door / CD	2564-805-0-02	1	X	PZ-3100 Common
N	4	1915 7039	Knob A / tact	2564-860-0-01	1	X	PZ-3100 Common
N	5	1915 7040	Knob B / tact	2564-861-0-02	1	X	PZ-3100 Common
N	6	1915 7041	Knob C / tact	2564-862-0-02	1	X	PZ-3100 Common
N	7	1915 7042	Knob D / tact	2564-863-0-02	1	X	PZ-3100 Common
N	8	1915 7043	Knob E / tact	2564-864-0-02	1	X	PZ-3100 Common
N	9	1915 7044	Knob F / tact	2564-865-0-01	1	X	PZ-3100 Common
N	10	1915 7045	Case / upper	2566-801-0-03	1	X	PZ-3100 Common
N	11	1915 7030	Knob / door open	2569-863-0-02	1	X	PZ-3100 Common
N	12	1915 7031	Knob / door hold	2569-271-0-00	1	X	PZ-3100 Common
N	13	1915 0110	Mecha unit / CD	2597-050-0-00	1	C	PZ-3100 Common
N	14	1915 7035	PCB unit / display	2571-005-0-00	1	X	PZ-3100 Common
N	14-1	1915 7036	Interconnector	2564-560-0-00	1	X	PZ-3100 Common
N	14-2	1915 7037	FPC / display PCB	2569-550-0-91	1	X	PZ-3100 Common
N	15	1915 7032	AMP unit / CD	2571-001-0-00	1	C	PZ-3100 Common
N	15-1	1915 7033	Spring B / battery	2569-181-1-00	1	X	PZ-3100 Common
N	15-2	1915 7034	Spring C / battery	2569-182-1-00	1	X	PZ-3100 Common
N	16	1915 0166	Spring A1/ battery	2569-184-1-00	1	X	PZ-3100 Common
N	17	1915 0167	Spring A2/ battery	2569-185-1-00	1	X	PZ-3100 Common
N	18	1915 7046	Case / lower	2566-803-0-02	1	X	PZ-3100 Common
N	19	1915 7029	Cover / battery	2569-807-0-02	1	C	PZ-3100 Common
N	20	1909 6649	Label / FCC caution	0074-235-0-00	1	X	for USA
N	20	1909 2652	Label / caution	0074-227-0-00	1	X	for EU
N	21	1915 7038	Label / rear	2511-850-0-87	1	X	for USA
N	21	1915 7025	Label / rear	2511-850-0-92	1	X	for EU
N	22	1915 0164	Label / identification	2540-850-0-02	1	X	for USA
N	22	1909 2654	Label / warning	0074-225-0-00	1	X	for EU

#### CD MECHANISM

	13	1915 0110	Mecha unit / CD	2597-050-0-00	1	C	PZ-3100 Common
	13-1	1915 0171	Pick up / laser	0020-015-0-0001	1	C	PZ-3100 Common
	13-2	1909 8278	Switch / micro	0036-819-0-00	1	X	PZ-3100 Common
	13-3	1915 0172	Motor / CD slide	0022-107-0-0013	1	X	PZ-3100 Common
	13-4	1909 6238	Gear / motor	1497-255-1-00	1	X	PZ-3100 Common
	13-5	1915 0174	Gear A	2597-256-0-00	1	X	PZ-3100 Common
	13-6	1915 0175	Gear B	2597-257-0-00	1	X	PZ-3100 Common
	13-7	1915 0173	Motor / CD drive	0022-093-0-00	1	X	PZ-3100 Common

#### ACCESSORY

		1915 0176	Headphone	0025-072-0-0321	1	X	for USA
		1910 0296	Innerphone	0025-535-0-0112	1	X	for EU
		1910 0178	Adapter / AD-DC	0027-195-0-0113	1	X	for EU

Note : N - New parts

M - Minimum order/supply quantity

R - Rank

**Capacitors and resistors can not be supplied, because they will be available in your country.**

**CAPACITOR**

Item	Specification			Qty
C101	C: Chip type			
C102	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C103	Electrolytic 10V	100 $\mu$ F	$\pm$ 20%	1
C104	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C105	Electrolytic 10V	100 $\mu$ F	$\pm$ 20%	1
C106	Ceramic, C 50V	33 PF	$\pm$ 5%	1
C107	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C108	Electrolytic 6.3V	220 $\mu$ F	$\pm$ 20%	1
C111	Ceramic, C 6.3V	47 $\mu$ F	$\pm$ 20%	1
C112	Electrolytic 6.3V	220 $\mu$ F	$\pm$ 20%	1
C115	Ceramic, C 50V	0.01 $\mu$ F	+80/-20%	1
C117	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C119	Ceramic, C 4V	47 $\mu$ F	$\pm$ 20%	1
C120	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C121	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C122	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C123	Ceramic, C 25V	0.022 $\mu$ F	$\pm$ 10%	1
C124	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C125	Ceramic, C 50V	390 PF	$\pm$ 5%	1
C126	Electrolytic 6.3V	22 $\mu$ F	$\pm$ 20%	1
C127	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C129	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C131	Ceramic, C 50V	2200 PF	$\pm$ 10%	1
C132	Ceramic, C 25V	0.1 $\mu$ F	$\pm$ 10%	1
C133	Ceramic, C 16V	0.033 $\mu$ F	$\pm$ 10%	1
C134	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C135	Ceramic, C 50V	100 PF	$\pm$ 5%	1
C136	Ceramic, C 25V	0.056 $\mu$ F	$\pm$ 10%	1
C137	Ceramic, C 6.3V	4.7 $\mu$ F	$\pm$ 20%	1
C138	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C139	Ceramic, C 6.3V	22 $\mu$ F	$\pm$ 20%	1
C140	Ceramic, C 6.3V	3.3 $\mu$ F	$\pm$ 20%	1
C141	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C142	Ceramic, C 16V	0.033 $\mu$ F	$\pm$ 10%	1
C143	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C144	Ceramic, C 16V	0.033 $\mu$ F	$\pm$ 10%	1
C145	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C146	Ceramic, C 50V	27 PF	$\pm$ 5%	1
C147	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C148	Ceramic, C 25V	0.022 $\mu$ F	$\pm$ 10%	1
C149	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C150	Ceramic, C 50V	4700 PF	$\pm$ 10%	1
C151	Ceramic, C 50V	4700 PF	$\pm$ 10%	1
C152	Ceramic, C 25V	0.1 $\mu$ F	$\pm$ 10%	1
C153	Ceramic, C 25V	0.022 $\mu$ F	$\pm$ 10%	1
C154	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C156	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C157	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C158	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C159	Ceramic, C 50V	4700 $\mu$ F	$\pm$ 10%	1
C160	Ceramic, C 16V	0.047 $\mu$ F	$\pm$ 10%	1
C161	Ceramic, C 50V	1500 PF	$\pm$ 10%	1
C162	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C163	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C164	Ceramic, C 50V	0.01 $\mu$ F	$\pm$ 10%	1
C165	Ceramic, C 50V	30 PF	$\pm$ 5%	1

Item	Specification			Qty
C166	Ceramic, C 50V	30 PF	$\pm$ 5%	1
C168	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C169	Ceramic, C 6.3V	47 $\mu$ F	$\pm$ 20%	1
C170	Ceramic, C 50V	56 PF	$\pm$ 5%	1
C172	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C175	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C176	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C180	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C183	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C184	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C186	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C187	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C188	Ceramic, C 6.3V	22 $\mu$ F	$\pm$ 20%	1
C189	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C190	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C191	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C192	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C193	Ceramic, C 25V	0.1 $\mu$ F	+80/-20%	1
C194	Ceramic, C 6.3V	22 $\mu$ F	$\pm$ 20%	1
C195	Electrolytic 6.3V	100 $\mu$ F	$\pm$ 20%	1
C197	Electrolytic 6.3V	220 $\mu$ F	$\pm$ 20%	1
C198	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C199	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C200	Ceramic, C 16V	0.047 $\mu$ F	$\pm$ 10%	1
C201	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C202	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C203	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C204	Ceramic, C 25V	0.047 $\mu$ F	+80/-20%	1
C205	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C206	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C207	Ceramic, C 6.3V	47 $\mu$ F	$\pm$ 20%	1
C208	Ceramic, C 16V	47 $\mu$ F	+80/-20%	1
C209	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C210	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C213	Ceramic, C 50V	150 PF	$\pm$ 5%	1
C214	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C216	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C217	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C220	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C221	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C301	Ceramic, C 50V	680 PF	$\pm$ 10%	1
C302	Ceramic, C 50V	680 PF	$\pm$ 10%	1
C303	Ceramic, C 50V	150 PF	$\pm$ 5%	1
C304	Ceramic, C 50V	150 PF	$\pm$ 5%	1
C305	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C306	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C307	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C308	Ceramic, C 6.3V	10 $\mu$ F	$\pm$ 20%	1
C309	Ceramic, C 25V	0.22 $\mu$ F	+80/-20%	1
C310	Ceramic, C 25V	0.22 $\mu$ F	+80/-20%	1
C311	Ceramic, C 16V	1 $\mu$ F	+80/-20%	1
C401	Ceramic, C 50V	1000 PF	$\pm$ 10%	1
C901	Ceramic 50V	0.1 $\mu$ F	+80/-20%	1

## RESISTOR

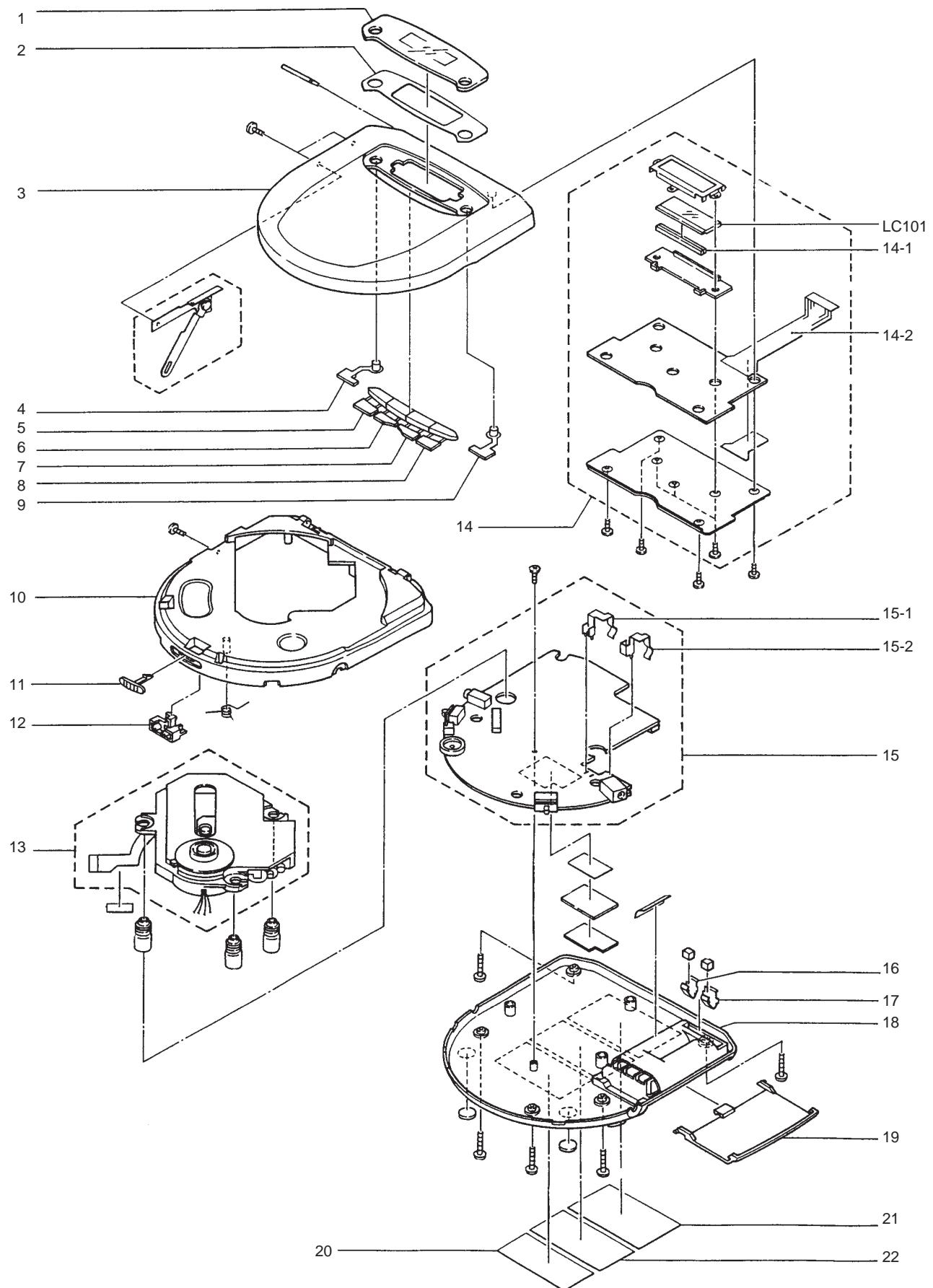
All resistors are chip type, 1/16watts,  $\pm 5\%$  unless otherwise specified.

Item	Specification	Qty	Item	Specification	Qty	
R101	2.2 $\Omega$	1/8W	1	R160	470K $\Omega$	1
R102	10 $\Omega$		1	R161	10K $\Omega$	1
R103	1.5K $\Omega$		1	R162	10 $\Omega$	1
R104	18 $\Omega$		1	R163	100K $\Omega$	1
R105	18 $\Omega$		1	R164	1K $\Omega$	1
R106	100 $\Omega$		1	R165	10K $\Omega$	1
R107	47 $\Omega$		1	R166	2.2K $\Omega$	1
R108	4.7K $\Omega$		1	R167	~ 47K $\Omega$	7
R109	150K $\Omega$		1	R173		
R110	100K $\Omega$		1	R174	4.7K $\Omega$	1
R112	1K $\Omega$		1	R175	47K $\Omega$	1
R113	56K $\Omega$		1	R176	47K $\Omega$	1
R114	33K $\Omega$		1	R177	10K $\Omega$	1
R116	8.2K $\Omega$		1	R178	~ 47K $\Omega$	6
R117	33K $\Omega$		1	R184		
R118	33K $\Omega$		1	R185	5.6K $\Omega$	1
R119	18K $\Omega$		1	R186	10K $\Omega$	1
R120	27K $\Omega$		1	R187	10K $\Omega$	1
R121	10K $\Omega$		1	R188	10K $\Omega$	1
R122	68K $\Omega$		1	R189		
R123	10K $\Omega$		1	R193		
R124	680K $\Omega$		1	R195	4.7K $\Omega$	1
R125	270K $\Omega$		1	R196	47K $\Omega$	1
R126	120K $\Omega$		1	R197	47K $\Omega$	1
R127	390K $\Omega$		1	R198	47K $\Omega$	1
R128	150K $\Omega$		1	R200	1K $\Omega$	1
R129	150K $\Omega$		1	R201	1.5K $\Omega$	1
R130	15K $\Omega$		1	R202	2.2K $\Omega$	1
R132	39K $\Omega$		1	R203	4.7K $\Omega$	1
R133	150K $\Omega$		1	R204	12K $\Omega$	1
R134	0 $\Omega$		1	R206	100K $\Omega$	1
R135	120K $\Omega$		1	R207	33K $\Omega$	1
R136	330K $\Omega$		1	R209		
R137	2.2K $\Omega$		1	R212		
R138	4.7K $\Omega$		1	R213		
R139	10K $\Omega$		1	R219		
R140	1M $\Omega$		1	R220	27K $\Omega$	1
R141	100K $\Omega$		1	R221	11K $\Omega$	1
R142	100K $\Omega$		1	R222	100K $\Omega$	1
R143	100K $\Omega$		1	R223	10K $\Omega$	1
R144	91 $\Omega$		1	R231	4.7K $\Omega$	1
R145	~ 47K $\Omega$		4	R232	~ 10K $\Omega$	10
R148				R240		
R149	100K $\Omega$		1	R241	1K $\Omega$	1
R150	100K $\Omega$		1	R242	1K $\Omega$	1
R151	15K $\Omega$		1	R243	10K $\Omega$	1
R152	15K $\Omega$		1	R244	100 $\Omega$	1
R153	15K $\Omega$		1	R245	10K $\Omega$	1
R154	470K $\Omega$		1	R246	10K $\Omega$	1
R155	1M $\Omega$		1			
R156	3.3K $\Omega$		1			
R157	3.3K $\Omega$		1			
R158	10K $\Omega$		1			
R159	1M $\Omega$		1			

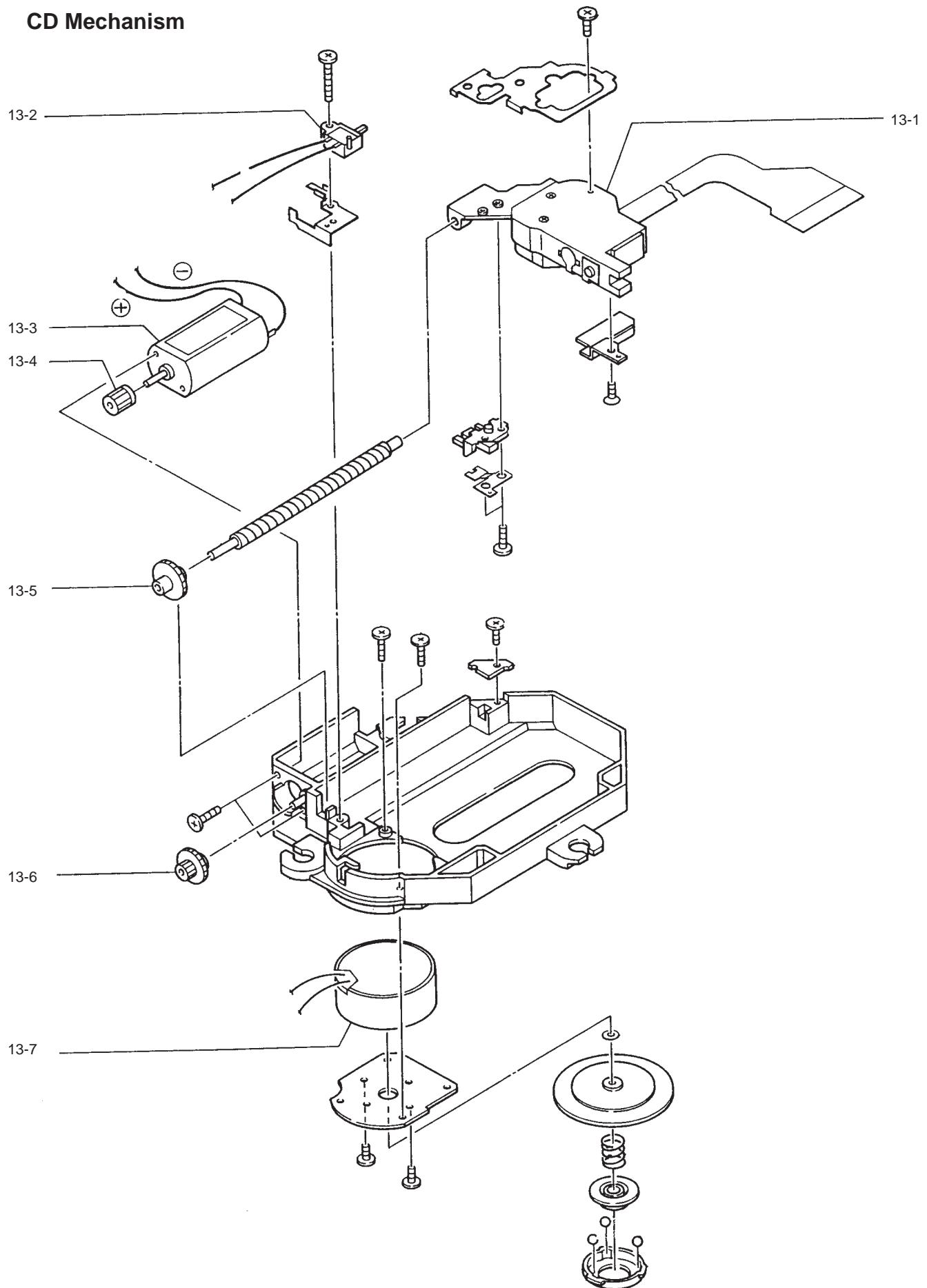
Item	Specification		Qty
R247	10KΩ		1
R248	22Ω	1/10W	1
R249	2.2KΩ		1
R250	220Ω		1
R251	6.8KΩ		1
R252	2.7KΩ		1
R253	120KΩ		1
R254	100KΩ		1
R255	1KΩ		1
R256	1KΩ		1
R157	10KΩ		1
R258	15KΩ		1
R259	20KΩ		1
R260	10KΩ		1
R261	10KΩ		1
R262	1KΩ		1
R263	10KΩ		1
R264	4.7KΩ		1
R265	2.2KΩ		1
R266	5.6Ω	1W Metal Type	1
R267	22KΩ		1
R268	10KΩ		1
R269	0Ω		1
R270	10KΩ		1
R272	10KΩ		1
R274	680Ω		1
R275	470Ω		1
R279	1Ω		1
R301	~	12KΩ	6
R306			
R307	1KΩ		1
R308	1KΩ		1
R309	100KΩ		1
R310	100KΩ		1
R311	15KΩ		1
R312	15KΩ		1
R313	2.2KΩ		1
R314	2.2KΩ		1
R315	1KΩ	EMI BEAD	1
R316	1KΩ	EMI BEAD	1
R322	0Ω		1
R401	1KΩ		1
R405	100KΩ		1
JP101	0Ω	1/8W	1
JP102	0Ω	1/8W	1
JP103	0Ω	1/10W	1
JP277	0Ω	1/10W	1
JP278	0Ω	1/10W	1
JP319	0Ω	1/10W	1

## EXPLODED VIEWS

### Case



## CD Mechanism



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